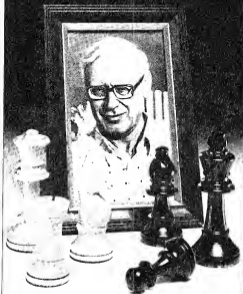


Achieving the Aim



M. M. BOTVINNIK

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Achieving the Aim

by

M.M. BOTVINNIK

International Grandmaster

Translated by

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Preface to the English Edition

My tournament appearances have involved British chess, so it is both an honour and a pleasure for me that my book is being published in England.

Obviously while working on the book (I started preparing material for it in the summer of 1969) I have often posed myself the question, How would the Western reader regard it? After all, over there they were even less well informed than in the USSR of what had been going on behind the scenes in chess. Yet this book will probably also have yet another point.

It is no secret that in the West false ideas about Soviet life are common. In this connection I would like to quote an episode that took place about fifteen years ago. In the company of M. Euwe and our mutual friend W. Muhring I paid visits to chess players in the Urals and in Siberia. During our trip one could only marvel at the unshakeable anti-Sovietism of Muhring. Finally we got together at my dacha near Moscow. When Muhring came up to the cottage my dog Volchok got hold of the tall Dutchman's wide trousers. What next? They became very friendly. During the meal Volchok sat next to Muhring, the Dutchman stroked him and said "You're a good dog, Volchok". The dog reciprocated in his own way....

Then a miracle happened. Muhring's criticisms came abruptly to an end. It seems he realised that if dogs here had normal canine interests then Soviet citizens were normal people too!

I hope this book will help English speakers to understand better what is happening in the Soviet Union. Then these memoirs will have played the same role as that once played by a guard dog during the visit to Moscow by my Dutch friends.

Moscow, 18 March 1980

M. M. BOTVINNIK

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CHAPTER 1.

The First Moves

"MISHA, what are you doing?"

I didn't hear the question—I was writing a play.

I was in my ninth year, and by that time I had already got copies of Pushkin, Lermontov, Gogol and Turgenev from the second-hand bookshops. The books were cheap (the money was provided by Mother). I used to read them during the light 'white' nights, spoiled my eyesight and so started wearing spectacles. Then I saw 'Don Carlos' at the Bolshoi Dramatic theatre and decided to become a playwright.

"Misha, what are you doing?"

At that point I returned to the real world and saw my Uncle Julius, the husband of my cousin Alexandra. I explained that I was writing the first act. Scene One (the king, a courtier, another courtier) was already finished. In Scene Two a third courtier was added, and as for what comes next—well I don't know.

"If you don't know, then don't write!" said Julius.

So I didn't become a writer; the unfinished first act was destroyed. For my next birthday Uncle Julius gave me *War and Peace* for a present. I was a good lad, probably, studied easily and on my own. As far as I can remember Father beat me only once. He was a dental technician and used American material in preparing false teeth. One day Lenny Baskin, a friend of my brother Issy (Issy was three years older than me; he was killed in September 1941 in a battle near Leningrad), approached me and asked whether I could pinch a packet of this material.

I was so flattered by the trust put in me that I couldn't refuse Lenny.

Naturally Father noticed the loss. I denied everything, but it was no

use. I have never forgotten the humiliating procedure, just as I have never forgotten the room where it happened, and how my father held me, and my roars. Apparently Father realised that I couldn't tell the truth—it would have let Lenny down—and let the petty thief off. Three years later Lenny Baskin taught me to play chess.

We lived on Nevsky Prospect, and my brother and I were regularly taken to play in the Catherine Garden. Then my brother started school, and I went to a children's group. On his way home from work Father called in for me and took me home. I can remember how one winter we were walking along the Nevsky as thick snow was falling. The snowflakes captured everything as they fell on the passers-by and pavement. Before this I had always felt as if in a void, but suddenly I felt shut in and frightened.

"Papa," I said, "look, we're living in snow." Father only laughed. In 1920 Mother fell ill, and Father left us.

Until he was 25 Father had lived in a village near Minsk where he had attended elementary school. Then he had worked for his father as a farm hand. He had real physical strength, and could throw the strongest bull in the herd to the ground once he had hold of the horns. He had a tough character too. When he fell out with my grandfather (whom I never met) he went away to Petersburg and became an apprentice with a dental technician Vasily Yefremov (whose son, a Professor of the Leningrad Polytechnic, later became Minister of Electrical Industry).

Father passed his trade tests, got his diploma and to the end of his days sat at his work bench.

Relations with Father remained good, he watched over us and gave material help, yet a new life had begun.

I imagined myself to be the chief figure in the family and claimed that Mother and brother Issy should obey me. At first they took an indulgent attitude to my claims, but once they rebelled. Then I took hold of a cup and threatened, "Either my way, or I'll smash the cup." In my fervour I broke the cup, but that marked the end of the tyranny of the younger son.

My brother and I attended a school that was far away, by the Finland Station. It was called Number 137 Soviet United Work School, but in

essence it was German's Vyborg Eight Class Commercial College. In 1905 a group of progressive teachers headed by P. A. German had organised a private school. For the first three years till it got established the teachers worked for no salary.

Every year the foundation of the school was celebrated and I had occasion to hear Peter Andreyevich himself tell the story of how an announcement was put in the paper that the College would have co-education of boys and girls, but the typesetter made a mistake and put in an extra letter so that the announcement came out as 'combined betrothal' of boys and girls. The newspaper corrected the mistake and put the advert in again, but the first entry test was taken by just one pupil! (Russian *obucheniyе* = education; *obrucheniyе* = betrothal. Tr.)

The heart and soul of the younger classes was Mr. Nikonov who taught Natural Science. Small in stature (at the time he seemed a giant to us), always dressed in a long frock-coat, with a beard, he only seemed stern. Later on when the school was closed he became a Professor in the Teacher Training College at Smolensk.

Literature was taught by Zinaida Valerianovna. Discipline was weak in her lessons, but when she read to us her voice rang out strong, or reflected tears of emotion and you could hear a pin drop we were all so entranced.

The History teacher was Mr. Shuitan who always wore blue trousers and a service jacket. He had a superb knowledge of his subject, had a strict character, and people were frightened of him. Once when he was telling us about Ivan the Terrible he stopped and stroked my head (I had been listening, it seems, with open mouth) and said to general laughter "What a good boy Misha Botvinnik is." Suddenly he disappeared. The girls told in whispers that he had fallen in love with one of German's daughters, but became so entangled in his emotions, poor fellow, that he had poisoned himself in the park.

There were lessons in listening to music. The whole school would assemble in the large hall where Lidiya Andreyevna would talk to us and then play the pieces. She was often helped by students from the Conservatoire, singers and musicians. She lived in a world of music and might not notice, for example, that her underskirt was showing. The lads would

guffaw, but she tolerated it. The benefit from her lessons was undoubted. She used to tell us about the young Prokofiyev and passionately defend him (at that time he was under attack from the intellectuals).

Lidiya Petrovna Treyfeld was a German, it seems, but most likely from Alsace. She had an excellent knowledge of German and a reasonable knowledge of French. In her lessons we read both Heine and the ancient tale 'Kleider machen Leute' ('Clothes make the person') as well as various other items. She was very concerned at our ignorance, and almost fainted when Shurka Orlov once translated 'Le corbeau intelligent' as meaning 'the intellectual crow'. She was an old maid, terribly thin and wore a wig and an old-fashioned pince-nez. It was hard to be sure of her age—probably about 70. She had a very severe appearance, but there was no limit to her kindness. She was completely alone and lived by the school. It was said that when they were collecting money for the school in 1905 she gave the greater part of it—all that she had.

Although Mother was often ill she always tried hard to ensure that her sons were properly fed and got a good education. We were very poorly dressed, a feature that made us stand out amongst our contemporaries. Our food was simple—sauerkraut soup (I still have a fondness for it), cutlets or meat with carrots. It was Mother who sent us to school on the Vyborg side since the German school had been recommended to her.

When Aunt Bela (Mother's older sister) invited my brother and me to call it stands to reason that we never refused. She lived pretty far away on the 5th Rota (now 5th Red Army Street). We dressed neatly and set off licking our lips. At Auntie Bela's you could stuff yourself with all sorts of tasty things. Once I went too far and suffered for it. I was coming home on foot (I rarely took the tram, a habit I got into consciously for the sake of the public good in the years of War Communism when the trams cost nothing to ride on) and half-way home by Tsarskoelsky Station (now Vitebsk Station) I felt queasy. I decided to go home. I managed to get along Zagorodny and Vladimir Prospects and turned into the Nevsky. I got along Nevsky, turned into our yard and climbed to the third floor. When Mother opened the door to me I flashed past her like a bullet, went up the corridor, but then committed a mistake which seems to be typical of me (how many good opportunities I have passed

up at the chess board for this reason!) — I prematurely decided that I had reached my objective. . . .

I was a round-shouldered lad with a flat chest and didn't go in for sport. Mother introduced me to a tall well-built young lady, probably one of her patients (Mother was a dentist). As a present I was given a book by Muller which was well known in those days. I tried to live according to Muller, and quite liked it. For the half-century or so since then I have done morning exercises. The weak lad straightened up and, as they say nowadays, noticeably 'filled out'.

I became interested in photography, in cats (there is still a photograph of Burzik the cat asleep that I photographed). Mother got me to go to a musical school. In the autumn of 1923 I learned to play chess and everything else receded into the background.

The chess board was homemade, a square piece of plywood with the squares shaded in ink; the pieces of palm wood, thin and unstable. One white hishop was missing and a lead soldier stood on the f1 square. I calculated badly, and although I was allowed to take moves back I was always hlundering something away, including this toy soldier.

Of course my passion for chess was no accident. Chess, as I have often pointed out, is a typical inexact problem similar to those problems which people are always having to solve in their everyday life. (Crossing the street, a court case, the orchestration of melodies, managing a firm and so on.) The fact that chess was thought up by man whereas other inexact situations arise as if apart from his will has no real significance as regards the methodology of solving. What is important is that in order to solve such inexact problems it is essential first of all to limit the scope of the problem (otherwise you will flounder in it) and only then is there the chance of a more exact solution. Hence it is a mistake to think that chess does not reflect objective reality. It reflects man's thinking.

Following the example of the game of chess one can study the method of limiting the scope of inexact problems which man uses in his activities. Two hundred years ago the electrical technician, philosopher and politician, Benjamin Franklin, in his work *The Morals of Chess*, wrote that chess was not merely an idle amusement; several valuable qualities of the mind, useful in the course of human life, are to be acquired and strength-

ened by it, so as to become ready on all occasions; for life is a kind of chess . . .

One can marvel at Franklin's insight (his work also contains a hint about the zone of play which we deal with at the end of our book) all the more so because some great men after his time did not always properly assess the place which chess occupies in the life of mankind.

I think that the capacity to solve such problems, which all people have to varying degrees, is inherited like a musical ear, physical dexterity, memory and so on, but this talent can show itself only in a favourable environment. Probably I had a definite predisposition for the successful solution of inexact problems, and when I became familiar with chess, then, in the conditions of Soviet society, I was able to devote a considerable amount of my thoughts, time and energy to it.

A chess player can demonstrate his capabilities only after two standard operations (amongst others) can be carried out unconsciously, automatically: moving a piece from any part of the board to any other part, and exchanging pieces on any square. Hence at first I played badly. What would seem to be simpler than moving a piece from one square of the board to another. Yet not a single mathematician had even undertaken the solution of this constantly repeated task in chess; it was considered that this problem was of exceptional complexity. Yet a human being works through this operation as a simple and standard one!

A university student lived in our flat and a friend called in regularly for him. The friend was a second-category player* and I played him once. I lost straight away. "Perhaps I should play the other one?" asked my opponent, pointing to my brother. Our neighbour only waved his hand dismissively, "He plays even worse . . ."

My brother did not feel so confident in life as I did, in the sense that he found it harder to adjust. Thus, he did not like the humanitarian subjects and could not overcome this hostility. Physics and mathematics came easily to him. He liked to do everything himself. The old work bench belonging to Father was the centre of his workshop—it was in the

* The Soviet qualification system starts at fourth category moving up to third, second, first category, candidate master, master and finally grandmaster. *Tr.*

room where the pair of us lived. The disorder in the room could only be compared with Issy's enthusiasm, but the affair in hand got done. Later on he created the first system of traffic lights in Leningrad, and just before the war he was head of the special construction shop of the tram and trolley-bus administration.

When we were children we often fought, but later became friends.

I played in the school chess championship, but was somewhere in the middle of the table. At that time the opening textbook by Grekov and Nenarokov started appearing in separate sections, and I greedily took it all in. However, I played a Ruy Lopez according to the book against Vitya Milyutin (he was about five years older than me) and was dismayed as soon as he started playing differently from Nenarokov. Still, in my class I was champion.

I called in on Lenya Segal, a classmate of my brother. Lenya had long curly hair (he was to become an architect) and loved to discourse on positional play. I listened to him with surprise and understood nothing. It would seem that for me it was a case of working up concrete concepts, and only after that generalisations. Lenya came from a well-off family, and we played with pieces of ivory of very elegant design. I didn't understand the position, but easily outplayed him.

At that time the former world champion Emmanuel Lasker paid a visit to the Soviet Union. He played exhibition games with masters and gave simultaneous exhibitions. In Leningrad the simul¹ took place in the building of the local Finance Office. I bought a ticket and joined the spectators. It was a difficult exhibition; one of the participants S. Gotgilf played along with Lasker in the Moscow International tournament which took place eighteen months later.

Lasker behaved with great confidence despite his fifty-five years; he permitted the players to choose White if they wanted to. He played strongly, but slowly. After 15 moves I left; it was already late.

I made progress starting with the school championship. This was in the winter of 1924. I became champion even though Grisha Abramovich "himself" was playing. He was a third-category player and a member of the Petrograd Chess Assembly. Grisha became my first patron, and in the role of guest I sometimes visited the Chess Assembly with him.

Mother began to get seriously worried and tried to talk me round. "You'd do better to become an artist. Do you hope to become a Capablanca?" She went in secret to school, but the headmaster Mr. Parkhomenko defended me, "Your son is a bookworm, leave him alone. . . ."

I became a member of the Assembly on 1st June 1924. I had to add three years to my age (16 was the minimum age). The President of the committee (and the Chairman of the all-Russian Chess Union), S. Weinstein, guessed my cunning trick, of course, but my spectacles gave me a solid appearance, and it all looked plausible. In this respect I was not the only one. Seryozha Kammer was only slightly older. As soon as we got to know each other he suggested playing a training match—I lost all three games. In the summer of 1924 I was no match for him, but I soon outstripped him.

Seryozha's vocation was study composition. A study is different from the practical game. In a game the chess master does not calculate variations to their logical end, but breaks off when he reaches a certain point. A great deal depends on the scope of his memory, and the swiftness of his nervous system. In such cases a master is helped by his general assessment of the position.

In studies positional assessment is less important, and so all variations are calculated almost to the end.

When Seryozha played chess he was always looking for a study that was not there, and so suffered setbacks, but in a year or two he won complete recognition as a composer. I remember how he showed one of his studies to Leonid Kubbel, one of the greatest composers and problemists. Kubbel huffed and puffed over it for a long time, but he couldn't solve it, which was rarely the case with him. When Seryozha showed the solution Leonid Ivanovich looked at my comrade with surprise.

Mother provided the money for my club subscription. She was the one, too, who gave me the money for my first tournament entry fee. At that time each participant contributed 3 roubles, and the prizes for the winners came out of this. In the very first tournament I won first prize, 18 roubles, and so became an independent person.

I won the next tournament too, but I had to contend with an unpleasant incident. A certain Folga was playing, an artist by profession and a

deaf mute. He and I were in contention for first place, and when I got into difficult positions Folga could not hide his joy, and brought this to my notice with gestures. Finally my turn came. Folga was in the course of losing the decisive game; of course I expressed ironical sympathy to him. My rival made out that he didn't understand. How could I explain it to him? I took hold of the white king and placed it flat on the board. The consequences were frightening. Weinstein summoned me, gave me a telling-off and warned of my possible expulsion. My response was to tremble, and I was let off. I have never done anything like that again in my chess life.

The Assembly had its premises in the Vladimir games club (now the Lensoviet Theatre) and in order to reach the second floor one had to pass through the 'gilded places' which included the large billiard hall. Once a billiard table was stripped of its cloth, and all the members of the Assembly were lined up in an attempt to discover the thief. Later the thief was found to be an outsider.

I would come back late from the club, and in my hungry state would greedily get through sandwiches and a glass of milk as, year after year, Mother solicitously left out the standard supper for me. Then I would settle down to analyse the game just played. In my fervour I would start banging the pieces, Mama would wake up, cry shame on me, and there was nothing to do except go to bed.

There were changes coming in the chess world. The far from numerous all-Russian Chess Union was liquidated, and a massive chess organisation set up based on the Trade Unions and Physical Culture Councils headed by Nikolai Vasilievich Krylenko.*

The Chess Assembly in Leningrad was liquidated too, and soon a fine chess club was opened in the Palace of Labour under the direction of the young Ya. G. Rokhlin.

N. V. Krylenko (a well-known Party and State official, a comrade-in-arms of Lenin) loved chess passionately. He played chess by post, took

* N. V. Krylenko (1885–1938), Old Bolshevik, Commissar for War 1917, Commander-in-Chief Armed Forces 1918, Public Prosecutor for revolutionary tribunals, Commissar for Justice of the RSFSR and later of the USSR, liquidated in 1938 as part of the Great Purge. *Tr.*

part in team events, spoke at chess meetings, wrote articles, edited chess publications and had a touching care for chess masters, though he did not forgive conceit or disdain for social interests. He was a person of rare principle (at the time he was Deputy Commissar of Justice) and the interests of the Soviet people were paramount for him.

He could see right through people as the saying goes; it was hard to fool him. When he took over the leadership of the Soviet chess organisation he carried out a sort of revolution in Soviet chess life. The game became available to all the working masses, including beardless youths. Chess books and magazines appeared, and the most massive organisations, the trade unions, began to devote a lot of attention to chess. Everywhere chess circles sprang up—at work places, schools and military units. The Councils of Physkultura and trade unions assigned the necessary funds for the development of chess; there had never been anything like it before in history.

Krylenko decided to test the playing strength of Soviet masters. Partly with this aim in mind he organised the first Moscow International tournament in 1925. The other aim was to make chess more popular. Before this event only once had a Soviet master played against the leading foreigners—I. Rabinovich won seventh prize in the Baden-Baden tournament. This was judged a great success, and when Rabinovich appeared in the new chess club in the spring of 1925 when the Leningrad Championship was in progress he was met by an ovation. However, this episodic success could not satisfy Krylenko.

The participants of the Moscow tournament were in the main those foreigners who had played in the famous New York 1924 event (with the exception of Alekhine, who was hostile towards the Soviet Union, a feeling that was mutual*). World champion Capablanca, the former champion Em. Lasker, Rubinstein, Marshall, Reti, Tartakover, Torre and others represented the foreign chess world.

The tournament provoked the first wave of enthusiasm for chess

* Though Alekhine still had articles published in the Soviet chess press, and corresponded with some of the leading players, e.g. Levenfish. The formal break in relations did not come till early 1928 when remarks by the émigré at a White Russian banquet in Paris caused serious offence. *Tr.*

amongst Soviet people and, what is particularly important, amongst schoolchildren. There really was a 'chess fever' and this was the title of a film that soon came out with the participation of Capablanca. (A comedy about a lovesick swain who neglects his fiancée due to his passionate interest in chess. Capablanca gives the saving advice that the should learn the game too! The Director was Pudovkin. *Tr.*)

The tournament took place in the building that is now the Metropole Hotel. They played in the large hall of the present restaurant. Now this organisation seems more than modest, but for those days... The hall was full to overflowing and crowds of exultant fans 'stood on duty' in the street waiting for the latest news from the tournament. I was 14, I had to go to school and nobody was going to send me to Moscow. I had to study the games from the newspapers.

Many people took it that Capablanca or Lasker would be the winner, but Capablanca lost two games (to Ilyin-Genevsky and, the day after a tough simultaneous in Leningrad, to Verlinsky). Lasker suffered one defeat, at the hands of Levenfish. The winner was Bogoljubow with the next Soviet player Romanovsky only seventh. In those days Bogoljubow had a Soviet passport, although he lived in Germany where he had settled down to married life. A year later he renounced his Soviet citizenship and this was a serious blow to Soviet chess. It was clear that the masters of the pre-Revolutionary generation (Romanovsky, Levenfish, I. Rabinovich, Duz-Khotimirsky, Verlinsky), despite their talent, could not withstand the best players of the West. Krylenko decided we had to wait until the young generation of Soviet masters became stronger.

The 1925 tournament played a most important role in the formation of a new Soviet generation of young players. There were no Pioneer Palaces as yet, but chess circles grew up in many schools and schoolboy players took an active part in trade union team events.

While the Moscow event was in progress I was called to the telephone—it was Rokhlin calling.

"Tomorrow you are to play against Capablanca in a simultaneous. Do you have any special requests?"

"Could I have a pass to the exhibition for my brother?"

"For your brother? Possibly for somebody else as well? Maybe you need several passes?"

"Yes, if possible."

"Out of the question; be satisfied that you are playing."

In November 1925 I was already one of the strongest first-category players in Leningrad, and no particular honour was being done me. Yet Mama was pleased, bought me a new brown Russian blouse, and I set off for the exhibition to the small hall of the Philharmonia (there was a buffet there later for the spectators). The hall was packed full. It was a rest day for the tournament in Moscow and Rokhlin had persuaded Capablanca to travel to Leningrad to give the simul'. Everybody wanted to gaze at the world champion, José Raul Capablanca himself. I could hardly force my way through to my place. Two spectators were already sitting on my chair, and I had to settle myself down as the third occupant! Obviously both these 'advisers' hindered me to the best of their ability but I had a hard character—I was playing this myself.

One of the most senior Leningrad chess players, Professor A. A. Smirnov (who had been chess champion of Paris in 1912), greeted Capablanca in his native Spanish. Capablanca frowned; either the ceremony was dragging on too long, or he was unhappy with the speaker's pronunciation, but finally the exhibition got under way. In a Queens Gambit Capablanca carelessly castled Q-side, came under attack, was forced to give up a pawn (to get into an endgame) but I exploited my advantage accurately. Capablanca pushed over the pieces (see Game 1.).

Later on I heard that Capablanca reacted with praise for my play, but the expression on the face of the champion at the moment the game ended was not at all pleasant.

I went out of the hall and met a classmate Vera Denisova in the foyer—a Tolstoy evening had been going on in the large hall to mark the fifteenth anniversary of the death of Lev Nikolayevich. Vera was shattered by my success.

The next day I overslept in my joy and was late for the first lesson. The boys caught sight of me through the glass door and tried to raise a din, but you can't kick up a din in Mr. Shaitan's class (it was a history lesson). The bell went and they all dashed over to me. I realised that I was in

trouble and tried to escape, but my pursuers caught up with me in the hall and started to throw me up (recently a classmate Sonya Roginskaya recalled that I did not resist but merely pressed my glasses against my nose). I was saved by Mr. Shaitan who managed to preserve a serious appearance. The girls were all whispering on one side. Later on I got to know that they had decided that I had something about me.

However, I was keen on Murka Oclova, the sister of my friend Shurka. The girl was talented, a flirt, with light blue eyes.

"You won't get anywhere there," said Dimka Zaitsev, "Murka won't go kissing you, you're a Jew."

I was flabbergasted, not so much by the fact that she wouldn't go kissing me, as by the reason why she wouldn't. When I was born my father gave me a Russian first name. "He's living in Russia," he said to Mother, "so let him feel himself Russian." Father forbade the speaking of Yiddish at home, and his second wife was a Russian. And yet the strength of prejudice.

Several years later at the flat of Vera Denisova our class got together. Murka was clearly not in agreement with Dimka Zaitsev, but, what could I do, there was no trace left of my crush. And probably Dimka's opinion has changed in the course of time.

In 1926 I had to take first place in the semi-final group in order to qualify for the final of the Leningrad Championship. The strong first-category player Shebarshin and I both kept on winning our games. Then I only drew a won game against Lavrentyev, so my last hope was to outplay Shebarshin. Our game lasted about 11 hours in all, and in the end I managed to win it.

The game was adjourned a second time in a won rook and pawn ending, and my opponent decided to try for his last chance. In a roundabout way he made it known that if the game were to end in a draw we would both be invited to the final. What if the 14-year-old lad would fall for it. I didn't!

The final was in June. I started with 5 out of 51! Then things went less well, but I still managed to share second and third places with A. F. Ilyin-Genevsky. I had won a place for myself on the chess Olympus of my native city. We played in the Central House of Physkultura on the Moika.

I went to the rounds on foot across the Mars Field. At home I would drink a cup of milk and after my walk my head was clear and my mood excellent.

This was the first time that I felt confident at the board and felt my playing strength. Probably this occurred during my game with Rokhlin. I fell into a difficult position, but wriggled out ingeniously and adjourned the game with slight positional advantage. In the next session of play it became clear that I understood the position better and calculated the variations more exactly. My opponent floundered about and lost quickly.

In the autumn of 1926 my parents were worried. Rokhlin phoned my father and informed him that I was to play in a team match Leningrad-Stockholm on 5th board and that we were to travel to Sweden. Once again Mother hurried off to the headmaster, this time Mr. Tkhorzhevsky. He was our class teacher and taught history. He was a very serious, benevolent and wise person whose exterior was somehow like that of the leaders of the French Revolution. By the way, he had a fine knowledge of the history of the revolutionary movement.

He told Mother, "To see the world at such an age it is in order to miss school for ten days."

So I was on my way to Stockholm, and Father gave me money to buy things with. We went by train to Helsingfors (Helsinki) and gave simulé' there. I took on a European appearance since I was bought a suit, a Borsalino hat and horn-rimmed spectacles. Then by train to Abo and by boat to Stockholm. On the boat we were lined up for an identity parade after dinner—some Russian had not paid his bill in the restaurant. Then he was found and it turned out that a White Russian émigré had decided to arrange a provocation.

The match in Stockholm was very tense, but the Leningrad team won by a minimal margin. I managed to score $1\frac{1}{2} : \frac{1}{2}$ against the future grandmaster Stoltz. At the closing dinner we each had poured out for us a single glass of wine (the Prohibition law). One of the Swedes could not bring himself to approach me for a long time, but in the end he drank my glass too.

The next day we went to spend our money, a simple business. In the evening in the room which I was sharing with Ilyin-Genevsky there was

a large gathering of our people. We were hungry, but no longer had any money left for the restaurant. We scraped together all our loose change and volunteers went off to get some bread and cheese. We were stuffing our mouths when there came a knock at the door and the President of the Swedish Chess Union, Ludwig Collin, appeared at the door. He stopped short in embarrassment, but then made out that everything was in order.

"How did you like Stockholm?"

"A marvellous city," replied Ilyin-Genevsky, who had already managed to swallow his sandwich.

The return journey through the Gulf of Bothnia was a difficult one. The rolling of the ship was so strong that many people were sea-sick. I grew very weak and when we arrived at Helsingfors could hardly stand on my feet. At last Leningrad. In the evening my brother accompanied me to Father's taking a new suit for him in a suitcase. The janitor grabbed me by the hand at the entrance, and I looked at him with amazement.

"Phew," he spat out, "I didn't recognise you."

I should say so, since he had never seen me wearing a hat (not to speak of my horn-rimmed spectacles!)

The whole school gathered in the large hall. Mr. Tkhorzhevsky was in charge and I made a report on my trip. When it came to the return journey on the boat I started a detailed and too vivid description of the pitching about and all its consequences. Guffaws broke out.

"Misha!" said the headmaster beseechingly, "That's enough."

However, I was implacable and continued the account of my nautical impressions.

In the very first chemistry lesson the teacher Borovitsky called me out to the board. Obviously I knew nothing and got a 'fail' mark. This was the only time I got such a mark in my whole school career. At that time schools did not have examinations, there was no particular striving after high marks, so there was no special worry about this. The highest mark was 'good'; I normally got 'quite satisfactory'. I feel that this style of schooling, requiring knowledge and not just marks, had its effect on my conduct in chess. I did not go chasing after points, but looked at the essence: how was I playing, how deeply did I understand chess?

There was no Pioneer organisation in our school, but there was a Komsomol, though not at all numerous. In school I took an active part in communal life and was Chairman of the school academic council. At the age of 9 I started reading the newspapers and became a convinced Communist. It was hard to become a member of the Komsomol, as schoolchildren were hardly ever admitted. I tried to get in for a long time (my brother was already a member) and finally in December 1926 I became a candidate member.*

As early as the match in Stockholm I had been given a commission to write notes to two games from the Leningrad-Stockholm match, and these were published in the magazine *Shakmatny Listok*. This was the start of my career as a chess analyst. The habit of analysing objectively (when the analysis is to be published you can't do otherwise since you run the risk of being shown up) is very important for a player's attempt to perfect himself. Doubtless this factor contributed to my success over the next few years.

* The author became a member of the Party in 1940. *Zr.*

CHAPTER 2.

The Polytechnic

SCHOOL was finished. There was a group photograph of the leavers and their teachers. We did a leavers' play, Wilde's *The Importance of being Earnest*, in which I played the role of Ernest, but without any great success. The role turned out to be too serious for me.

I was still not yet 16, and I couldn't go on to higher education yet. At that time they had just restored entrance exams and the minimum age was 17. Well then, I would have to spend some time playing chess, and after that prepare hard so that in a year's time I would not fail the entrance exams.

In the summer of 1927 I took part in a six-man double-round tournament. I lived in a dacha at Sestroretsk, spent all day on the beach (my shoulders turned bluish-black), and twice a week I paid a visit to Leningrad. The journey was by train (at the time the trains just crawled along that line) so that you look out of the open window, the air was fresh, so fresh there is an unusual lightness about your body, the head was clear—then you really can play chess!

In the second half I lost the decisive game to Romanovsky and came second. I was put in the list of candidates, fifth in line, for admission to the USSR Championship. But the 'candidate' was already feared; my games were published in the papers.

Then Moscow. I stayed at the Hotel 'Liverpool' on Stoleshnikov. We played in the foyer of the October Hall of the House of Unions. I saw Krylenko for the first time and at the opening ceremony Bezymensky read his poem 'Chess'.

When we were in the train (obviously we travelled in the general car-

riage) Romanovsky who was then 35 years old said, "What if Misha should finish first?" and then laughed. Romanovsky was an exceptional player. His technique was not good, but he was indefatigable when it came to inventive ideas and he was dangerous in attack. He had a boundless love for chess. He was indifferent to money but adored adulation from the fans. Sometimes he gave the sort of advice you never forget: "If you have the attack, don't exchange pieces. Exchange only when you see that it leads to real advantage."

Once, in the winter of 1929, I was competing along with Romanovsky in the regional championship of Educational Workers. I played a game against a certain Batuyev, a second-category player. I got an overwhelming advantage as White, but then without making an obvious error I let the advantage slip and the game ended in a draw.

I said to Romanovsky, "Pyotr Arsenyevich, how was it that I didn't win that game?" His answer: "Once you didn't win it, Misha, that means that in your heart of hearts you didn't really want to."

Romanovsky's attitude to me, just as was the case with the whole of the older generation, was one of jealousy, and no particular good will. Before my appearance Romanovsky and his contemporaries held undisputed sway, and then suddenly this 'upstart' appeared!

At the end of the Soviet Championship I won four games in a row, gained the master title and shared fifth and sixth places.

Now I had to prepare for my exams to gain admission to an institute of higher education!

The question whether I should study or play chess did not present itself to me. I wanted to study, although chess was no less essential to me than my studies. Intuitively I realised that my studies would be useful for chess as well. On the other hand, I considered it obligatory for me to have some other work, just like everybody else. I didn't want to be different. Perhaps this method of combining chess with another profession is not so bad?

In physics and mathematics I worked on my own. What about social science and literature? In these the requirements and syllabuses changed quickly. I joined a group where an experienced teacher crammed twelve school-leavers. Everybody smoked, and, so as not to be a rare bird,

I started smoking for two months. Once these studies were over I gave up smoking at once.

Once I was asked, "Mishka, I study physics and mathematics with a former boxer. His brother is a well-known professor of electric traction at the Polytechnic. The professor dreams of playing with you. Will you come with me to Lebedev's for a meal?"

In the winter of 1926 I was already a 'known' chess player. I was playing then in the semi-final of the Leningrad Championship and, when I fell ill, a chess player from the school called to see me, and brought with him his friend Grishka Rabinovich, who from then on became a fan of mine.

We became very friendly and he was to be a great supporter of mine throughout my whole chess life. He had remarkable capabilities and in the 1940s became first Deputy Controller of the city Finance Department. Before my friendship with him I was very retiring, but my new acquaintance made me full of *joie de vivre*. He had a touchingly pleasant attitude towards me and took me to a barber's (I was shy of going on my own). In 1934 when I had to go to Hastings Grisha wrote a memorandum to the administration of the City Council and I had two suits made for me gratis. Once after the war I finished up in his office at a time when he was dealing with representatives of various organisations. He showed a well-nigh perfect knowledge of their financial affairs. I was there to ask for money for the Chess Club to do up its premises; the money, of course, was duly assigned. Later on Grisha defended both Candidate's and Doctor's dissertations and became a professor.

In the professor's home to which I had been invited, just opposite the Chemistry Department, there was a gathering of various academic figures. The host was Professor Kalantarov who was a second-category player before the Revolution. A simultaneous exhibition took place. The famous mathematician Ivan Matveyevich Vinogradov (who has recently celebrated his eightieth birthday) played in original fashion. First of all he moved all his pawns up one square "to give freedom to the pieces" as he explained it, and then played quite well, but it was no longer possible to save the position. Later on he and I holidayed together at Teberda and shared a room. He entertained me with funny stories—he was a superb raconteur. We last met about fifteen years ago.

"How do you spend weekends?" I asked.

"Grubbing up tree stumps at my dacha."

"With a crowbar?" "No, with my hands, just let me get a grip of the stump..."

Basically the people gathered at the *simal*^{*} were all professors of the Faculty of Electrical Technology which I dreamt of gaining admission to. At that time to become an electro-technologist was of no less significance than to be a physicist nowadays. It was no easy matter to gain admission. Ninety-five per cent of all places were awarded to leavers from the workers' and peasants' schools, and 5 per cent to those who took the exams. Kalantarov advised me: "Put your application in to FIZ (the Faculty of Industrial Farming), there's less competition there."

I took the exams and didn't wash myself (at that time everybody acted in this way—it was a favourable sign). The last exam was in physics. It turned out that the examiner was a young woman with a severe stern face. I solved all the problems, including one original one. The lady looked at me carefully. "What is specific resistance?" I looked at her in surprise. There was nothing about this in the physics book by Krayevich. Straight away the examiner shrugged her shoulders, but Yekaterina Nikolayevna Gorieva (wife of the well-known electro-technologist Alexander Alexandrovich Goriev, my future professor) let me go in peace.*

I was not accepted at the Polytechnic. The professors at that time had no say; everything was decided by the Proletstud (Student Academic Body). Out of the school-leavers who passed the entrance exams they only took children of specialists (i.e. engineers) and of workers. I was a son of "a person of physical labour" (there was such a category at the time and it covered janitors, dental technicians and so on). Rokhlín, the Deputy Chairman of the chess section of the local Union Advisory Committee, prepared an application and went to the Marble Palace where the Appeals Committee was located. After two months of efforts and alarms the mountain gave birth to a mouse, at least from my point of view. I was put down for the Mathematics Department of the University. There was a surplus of places in the department as the leavers from

* Russian academic tradition lays much emphasis on oral exams, as opposed to the Western tradition of written exams. *Tr.*

the workers' and peasants' schools were not keen to go there. Everybody wanted to work in the industrialisation field!

Yet I was after all transferred to the Polytechnic. In the first few days of January 1929 student team chess championships took place in Moscow. The man in charge of the Leningrad team was Ivan Demyanovich Pushkin, Deputy Chairman of the Leningrad Proletstud. Pushkin was actually studying in the Electromechanical Department. When we took first place in Moscow he slapped me on the shoulder saying, "I know, I know, you want to join us. We'll transfer you!" So, at the start of February the new Polytechnic student joined the group at their studies for the first time.

Nearly all the students were from the workers' and peasants' schools and in the age range 25–35. Of thirty students only four were straight from school. At first the attitude shown towards me was guarded, but this quickly faded away. I made new friends, a couple from the school-leavers.

There were hardly any general lectures at all in the Department except for physics where the lectures were given to all the students by Skobeltyn (father of the present-day Academician), and in the second year there were lectures on electrical measurements by Shatelen (one of the first Russian electrotechnologists) and on the theoretical basis of electro-technology by Academician Mitkevich.

The students got their basic knowledge in a group where the theory and exercises were dealt with by very well-qualified teachers. They took exams as appropriate in the course of the studies. There were no specific examination terms as such. The assessments were simple—pass or fail! The lecturers had a very good idea of the weaknesses of their students, helped them, and it was easy to check a person's knowledge.

Theoretical mechanics was taught by a former artillery lieutenant, Nikolai Alexandrovich Zabolkin. Short, tubby (with a round head too, though big out of all proportion) he drew himself up, and invariably wore a pince-nez on his small nose. In his eyes there was a look of suppressed cunning. He spoke in exact fashion, knew his subject perfectly and taught according to his own system: first of all he explained how to solve the problems (giving the formulae for this), carried out the exercises and

then expounded the theory. Certain of the people from the workers' and peasants' schools were badly prepared, and found it hard to study. One of them, a certain Deryugin, was sure that this arose from the original method used by Zabolotkin.

"Nikolai Alexandrovich, isn't it better, surely, to have the theory first, and then the exercises?"

"No, it isn't better, it's worse."

Then Deryugin started trying to prove in heated fashion that the theory was needed first, while Zabolotkin in a few words rebuffed this. Finally the despairing disputant employed his final argument.

"Well then, surely it makes no difference which comes first, and which next?"

Then Zabolotkin was transformed. His face became stern, there was laughter in his eyes.

"If it is all the same, then we won't change the existing way of doing things", he declared to the accompaniment of general guffawing.

The task in front of me was not easy. In five months I had to cover all the subjects of the first-year syllabus. There was hardly any time to study. I merely 'took' the exams (I attended the group studies, but missed the lectures).

I failed one exam in physics (Van der Waal's equation). I must admit that I used to prepare cribs. On the mornings that we had a test due I would get up at 5 a.m., do a summary of the course on a few sheets of paper, have breakfast and rush off for the tram. By 10 or 11 a.m. I would already be in the lecture hall. I could remember the work pretty well and glanced at the crib only in exceptional circumstances.

I shared the same desk with my friend Lev Tseitlin. I have never met a more capable student. He assimilated the very core of the work and the lecturers were rather afraid of him. By comparison with him I assimilated knowledge poorly; admittedly later on it transpired that I was better in research.

He commented to me half-jokingly, half-despisingly, "I know that you know nothing, but you keep quiet with the sort of look that induces the lecturer to believe that you know something."

So I got into the second-year course. Then there was a medical com-

mission and the question was, would they send me to military camp or not; after all I wore glasses. Camp is not the army and I was passed as suitable.

We lived under canvas. Due to my inexperience I occupied a place at the very edge of the tents. You only had to touch the tent when it was raining for it to turn wet—the tent let the water through.

At first they often chased us out to the aerodrome at night. Once I even got dressed while still asleep, lagged behind then caught up my detachment, but only became fully awake when we marched on to the airfield runway. The aerodrome at that time was in high grass full of dew, and we got wet through. The planes were antediluvian—Junkers (JUG 3) of corrugated metal, cloth I-2's and R-1's. Of course we didn't fly in them, but merely washed them and rubbed them over.

In the camp, for the only time in my life, I played three simultaneous blindfold games and didn't experience any difficulty in doing so (at that time Krylenko banned blindfold play, and in the USSR this prohibition applies for public exhibitions. The point is that a master plays blindfold below his usual creative level, and it might do harm to his health. Alekhine played blindfold very well, but had a negative attitude to such play.)

Then we paid a visit to Novgorod where we played a match against the city team.

Of course all this was poor preparation for the USSR Championship in Odessa, which was due to start in August, but in the quarter-final I easily took first place.

In the last round of the quarter-final I wore myself out in the process of 'squeezing' a win out of the game with A. Polyak. On the day before Rauzer had asked me about the game pointing out that if I won and he, Rauzer, won his game against Ryumin then on tie-break Rauzer would come ahead of Polyak and so qualify for the semi-final. In the semi-final it would be easy to fulfil the master norm. I already had a great respect for Rauzer and could not refuse him. As a result Rauzer 'took Ryumin apart' in only 17 moves as Black, and in the semi-final became a master.

Rauzer left behind a significant influence in the history of Soviet chess, and not just in its history. His opening ideas were closely linked with middle-game plans and are fully valid to this day (this applies to the

Ruy Lopez, the Sicilian Defence and the French Defence). He only investigated the move 1 e2-e4 for White and regularly created deep games. Unfortunately his nervous system was frail and his practical results did not correspond to his potential. He was an eccentric person (some years later he fell ill with a psychiatric disturbance) and perished during the blockade of Leningrad.

In 1931 in Moscow at the end of the USSR Championship I led my main rival Nikolai Ryumin by half a point, but there were still two rounds left. Ryumin had to play Black against Rauzer in the next round. It was then that I reminded Rauzer that it is a fine thing to repay one's debts.

Rauzer suddenly declared, "But I can't play chess well... I have irregular facial features!" At first I was taken aback, but decided to have recourse to a white lie.

So I said, "Alexei Alekhine who lives in Kharkov, do you know him? Does he have regular facial features?" "No, of course not." "Well, look here, Alexei Alekhine is an Apollo in comparison to his brother Alexander,* yet he can play chess!"

Rauzer played the game against Ryumin with great force and won.

However, back to the Odessa tournament. In the semi-final I played badly due to fatigue and on my return to Leningrad had to justify myself to my friends.

The second year of my studies also proceeded in an abnormal fashion. True, I passed the first term successfully. I attended the lectures, but there was nothing for me there. Within five minutes I ceased to understand anything, and with a sigh of relief I would take out my pocket set.

In our group the exercises on alternating current were carried out by Mitkevich himself. Once he called me out to solve a problem. I knew nothing, and as always in such cases he himself solved the problem for the student, and then he affectionately let me go back to my place. Everyone tried to take their exams with him!†

* Alexander Alekhine (1892-1946) was, of course, the Russian emigré world champion (1927-1935 and 1937-1946). Botvinnik first saw him at Nottingham 1936—see Chapter 3. *Tf.*

† Normal practice would be for the student to sit in front of a lecturer, draw out a card with a question on it, and then try to answer orally. *Tf.*

If a student knew nothing Mitkevich would still give him a pass mark, and console the unfortunate fellow with "Never mind, never mind. You can't encompass the unbounded!" All this reduced his deputy Kalantarov to despair—he was very strict. Yet when Tseitlin was promoted later on to lecturer, Kalantarov would beseech my friend not to lower the departmental pass rate!

Starting from January 1930 the reform of higher education began. The country was starting out on industrialisation and needed engineers; not just engineers, but people from the workers and peasants who were devoted to the Soviet Homeland. What was one to do if a number of people from the workers' and peasants' schools had been poorly prepared? The decision was taken to make study easier.

This was an essential measure, though a temporary one. Of course on the whole it lowered the standard of knowledge of young engineers, yet this standard was adequate to fulfil the obligations of the organisers of production.

Strange though it may seem I gained from the reform—I was not overloaded with an excessive volume of knowledge, and I could use my nerve cells for taking decisions in original situations.

Thus there began the era of the brigade-laboratory method. Examinations and tests were abolished. Groups were divided into brigades of six or seven students. There were not enough lecturers, and experts were drawn in from the production line. The Polytechnic was broken up and every department became an independent institute.

In 1930 I had occasion to play in a tournament to which only masters were invited—Levenfish, Romanovsky, Ilyin-Genewsky, Gothilf, A. Kubel, Model, Rokhlin and Ragozin. We played twice a week in the House of Physkultura Employees (there were also rounds played at other venues). In a tough struggle I secured first prize, a German chess clock (which served me well for about twenty years, until my daughter's nanny Matryona Semyonovna quietly started using it every day and it finally gave out). This was my first success against masters. Forty years later I gave up playing in competitive chess.

I kept up at the Institute. We had been warned that there would be no examination, but each student would get an individual project to

work up. There was no textbook. The lecturer, Nikolai Pavlovich Vinogradov, went through his theory with us (there was the Cremona diagram and the Vinogradov diagram) and each of us made a summary. Then there was the difficult project with no time for mutual assistance! We all did well in our studies.

In the summer of 1931 we did our practical at the Dnieper Hydroelectric complex. I went to the technical department, where I was given the task of calculating the temporary jumper (temporary transmission line) on wooden poles. Vinogradov had not told us anything about wooden supports, but I opened the *Electrotechnology Handbook*, looked in the section compiled by our lecturer and made the calculation.

No matter how I did it the supports kept falling. I was already in a state of despair when suddenly I saw a smiling Vinogradov—he was a consultant of the Dnieprostroy.

"What are you doing here?"

"Well, this. The wooden supports keep falling."

"The temporary jumper? Lower the tension of the wire."

Oh Lord, how simple. The supports stopped falling!

It was hard at the Dnieprostroy and the living quarters and food could not be compared with military camp.

We played a match against Zaporozhye. The Physkultura Council in the city helped us with tickets for the train to Leningrad when we left—they gave us a certificate to say that we were travelling "for exchange of expertise in the harvest competition". At that time there was a harvest campaign in progress and so the tickets were issued ahead of the queue.

So I duly finished at the Polytechnic. Of course there was no diploma project. We had studied for four years, in my case somewhat less. The country got the necessary number of specialists. The goal was achieved. Soon the previous practice in higher education was re-established.

I found myself assigned to the high-voltage laboratory named after A. A. Smurov. Smurov had set up this laboratory (with first-class equipment ordered from the USA) which was located in the Electrotechnical Institute on Pesochynaya Street. As a result of the reorganisation the laboratory was transferred to our Institute. Smurov was already seriously ill. Once, not long before his death, I was presented to him in his professor's flat.

It was boring for me in the laboratory. While I was still a student doing a practical I had had to calculate the stability of the planned Belorussia Energy system. I worked it out by the step-by-step method. Nowadays these calculations are easily carried out by a computer, but then I spent three months on the calculations.

At this point (winter 1932) Alexander Alexandrovich Goriev appeared in the Smurov laboratory. He was shown my calculations (I was being supervised by two postgraduate students, my senior comrades Vitya Gessen and Vasya Tokhkov). Goriev pointed out straight away that the basic formula which was being used to simplify the schema of the network was faulty. Consequently the whole calculation had to be thrown into the waste-paper basket!

Goriev held Diploma number 1 from our Polytechnic and was a universal figure in the study of electricity. At the end of the 1920s he introduced a system of equations describing the work régime of a synchronous machine. He introduced these equations within exact limits of the problem. Even earlier, though less rigorously, they had been introduced by the American scientist Park. Hence, in the Soviet Union this system of equations is known as the Park-Goriev equations. In essence they apply to any alternating current machine, not just synchronous ones. Almost all my work in electrotechnology is connected with these equations.

Goriev was tall and broad. When he became lost in thought it was a fearsome sight. His glance became lost in the distance, his lower jaw hung down. If his decision seemed important to him then he would strike the table with his massive fist and make his summary with aplomb. He came to the laboratory once a week. When he was appointed to the chair he started working only in his flat where he slept (and where there was always his terrier). This flat on the first floor of the professor's block was well known to his collaborators.

Goriev often came across Nikolai Nikolai Schedrin in his work at the Smurov laboratory. The latter was not tall, always had a delicate expression on his wrinkled face and never revealed his emotions. He too was a universal figure in electrotechnology and was a pioneer in the USSR in the field of calculating currents of short-circuiting. The pair of them together made a remarkable sight. It was most curious to look on as the

giant Gorjev loudly developed some idea or other and the small Schedrin calmly refuted it. Schedrin was the one who suggested to me the topic for my Candidate's dissertation.

Gorjev had a simple attitude to postgraduate students. He could never remember them, and when the postgraduate came to him and started telling him about something Gorjev would look over his spectacles, think a little and then either get rid of his visitor or start up an argument if he found the subject of interest to him.

Once Vasya Tolchkov appeared before him and started showing his calculations. Gorjev thought a while and asked, "What logarithmic slide rule did you use to calculate with an accuracy of five figures? A half-metre one?" Tolchkov proudly said that he had used a normal one of 25 centimetres.

Gorjev rose to his full height and roared at poor Vasya, "Get out of here!" On a normal slide rule you can only calculate to three figures. Postgraduate student Tolchkov had to change his academic supervisor and transferred to Vulf.

In December 1932 I too became a postgraduate of the Electro-Mechanical Department.

For my victory in the "tournament of masters of the House of Scientists" I was awarded a pass to a rest home (the first time that I had visited such a place!)

Along with my senior comrade Rokhlin I got ready for the trip to the Caucasus, to Teberda. All this fitted in very well—I had to rest and prepare for the next USSR Championship, the 8th.

Times were hard. The collective farms had not yet got on a firm footing, food supply was not easy, there were rumours of an epidemic of typhus. Mother did not want to let me go. However, my cheerful companion talked her round. "There is an excellent defence against insects—naphthalene. We will disinfect all the passengers."

Rokhlin kept his word. I died laughing while he sprinkled himself, me and fellow-passengers on the train. He would get into conversation with them, sprinkle the naphthalene into their pockets, while all the time with what sincerity he expressed annoyance, along with them, at the unpleasant smell on the train.

We travelled as far as Nevinnomyssk without mishap. We were waiting at night for a connection to Batalpushinsk. We couldn't get to sleep; children who had turned black and wizened from hunger kept asking for food. There was famine in the Kuban region. Our excitement had come to an end, and we could not look one another in the eye.

From Batalpushinsk we travelled by bus and arrived at the KSU (Commission for Assistance to Scientists) rest home in Teberda.

Here were mountains, the cold river Teberda (I bathed in it, or more accurately, plunged in and then retreated straight away), scientists, artists, writers.

I got to know Aseyev* and Kirsanov.† I was friendly with Aseyev right to the end of his days (at that time he discerned something romantic in me and cunningly squinting at me he christened me "a German poet of the early nineteenth century"). Witty, lively, Klava Kirsanova won everyone's approval. She was about 25 and tuberculosis forced her to spend the summer in Teberda. Four years later poor Klava was dead.

We played volley ball. Once I even made so bold as to clamber up on a horse. The horse knew who it was dealing with (just as Aseyev did) and started to climb uphill. Like Father Varlaam in Pushkin's "Boris Godunov" I realised that for my salvation I would have to "spell it out" and forced the horse to return. That was the end of my riding career.

Here in Teberda I thought for the first time about the preparation a chess master must make, and never parted from my chess set. I worked through opening variations, but still linked up opening and middle game badly. I went off to Leningrad with several of my "Teberdinsk" schemes, but they didn't help much. As soon as the opening was over I was forced to seek a plan from square one.

The 8th USSR Championship had a special significance. Players who had begun their careers in the Soviet period first made their appearance in the event in 1927. In the following Championship at Odessa, 1929, I had "failed" though the opposition was not the best available. In 1931 I was fortunate enough to win the title, but not all the leading represen-

* Aseyev (1889–1963), futurist and patriotic poet. *Tr.*

† Kirsanov (1906–1972), poet, winner of Stalin prize for poetry in 1951. *Tr.*

tatives of the pre-Revolutionary generation of masters took part. Now, in 1933, all the strongest players had gathered in Leningrad for the Championship. It was here in the halls of the Central House of Physkul'tura Employees that the battle was to be decided between the older and younger generations.

The tournament ended in complete victory for the young. One could not claim that the older generation had grown weaker; no, its representatives were around 40 years old. Yet the task set by Krylenko in the 1920s had been successfully carried out. A new generation of Soviet masters had grown up.

At that time there was a good tradition: after each win a master had to comment on it in front of the spectators, which always aroused great interest.

Many spectators had gathered for my game with Levenfish. I adopted one of my prepared lines, but my opponent complicated matters by his clever play, and White hardly maintained equality. In the ending Levenfish committed two or three inaccuracies and when the game was adjourned I put my score sheet into the envelope with the winning move a4-a5 written down on it.

During the break all the players had a meal in the House of Scientists. Levenfish looked at his pocket set and loudly announced, "If a4-a5 is the sealed move then I resign." I could not contain myself and nodded my head (later on in similar circumstances I would have behaved differently, since such a suggestion involves breaking the secrecy of the sealed move to some extent). We opened the envelope, shook hands and then I went back to do my duty by going through the game for spectators at the hall.

In my joy I hardly noticed what was going on around me. With total sincerity I criticised my own play and pointed out my opponent's slips. My friend Slava Ragozin was present and told me what happened (he was not playing there as he came to the fore only six months later).

The session of play for the adjourned games had not yet begun, so not only were spectators there, but also the participants both young and old. They listened with respect, Levenfish included. As Ragozin excitedly put it to me, "This was a creative triumph for our generation."

It would seem that not only Ragozin was of this opinion after the tournament. When I had played my last game I was introduced to Mikhail Zoschenko.*

He was thin, taciturn, and sad eyes stood out against the fine swarthy face surrounded by smooth black hair. It was not easy to believe that you were in the presence of the author of amusing stories. He raised a blush on my face by saying, "You will achieve a great deal in your life, and not just in chess." It would seem that he found little of amusement in me. When I remember this nowadays I think to myself, "If I solve the problem of an artificial chess player it will mean that Zoschenko was not wrong."

B. P. Posern, an old Bolshevik and one of the leaders of the Party organisation in Leningrad, was also present at the last round. The young masters surrounded him and asked for help in organising events between Soviet and foreign players; from 1925 onwards such contact had become an insoluble problem. "Well," he answered, "now this has some point to it. We will back you." Posern was close to S. M. Kirov.†

When I was working in the high-voltage Smurov laboratory I did not reveal much ability. I was also considered a not very active member of the Komsomol (Communist League of Youth. Tr.). Imagine the surprise of my comrades when the newspaper *Komsomolskaya Pravda* published the fact that I was included in the invitation to twenty young representatives of science, arts, culture and sport to attend the Fifteenth Jubilee Plenum of the Central Committee of the Komsomol.

The Secretary of the Party Bureau of the laboratory Kolya Tarasov (now a pensioner, formerly a member of the directorate of the Ministry of Energy) looked at me with a fixed glance when he announced this news. What was it he had not noticed in me before now?

The Jubilee was in the Bolshoi Theatre. Stalin was not there, he was on holiday in the south. Members of the Politburo made speeches. It was all very cordial and yet solemn. The Komsomol received its due, the mood was one of elation. Then there was a concert.

* Zoschenko (1895-1958), satirical writer. Tr.

† Sergei Kirov (1886-1934), head of the Leningrad Party organisation, looked upon as Stalin's deputy. His murder (later attributed to Stalin) marked the start of the repression of the 1930s. Tr.

The day after next our group of twenty was invited to a banquet in the restaurant of the Metropole to meet the leaders of the Komsomol Central Committee. A. V. Kosarev* sat opposite me. His sharp look and determined cast of face made a striking impression. There were many speeches. I can remember one of them. One of the people sitting near Kosarev stood up and eloquently noted the merits of the Komsomol. He concluded with a cunning laugh, "For all its triumphs the Komsomol is indebted to our great leader and teacher Comrade... Kosarev!" A guffaw arose, but the loudest laughter came from Kosarev himself.... (The point of the story is that the traditional end to the speech should rather have been Comrade Stalin. Tr.)

What had been building up now came to fruition. Soon after the Championship I was called to the phone by S. O. Weinstein, "Misha, important news. Come round, I'm waiting for you."

Weinstein, a man of 40 was balding, small eyes were hidden behind his spectacles while a large and somehow multicoloured nose was an unattractive feature of his face. When he got excited he would shove his right hand into his trousers and holding his waist would keep saying "Such a..., such a..."

All his life was in chess. He was in effect editor of *Shakmatny Listok* (now *Shakmaty v SSSR*) from its very foundation, collected chess books (his library was superb) and he had a large number of chess friends abroad, so he was a link in the chain of contact between Krylenko and foreign players.

Before the Revolution it was impossible to gain the master title in Russia, so Russian players went to the Congresses of the German Chess Union. Shortly before the outbreak of war in the summer of 1914 a delegation of Russian players was at the Mannheim tournament, amongst them Alekhine, Bogoljubow, Romanovsky, Selesniyev, I. Rabinovich and others (including Weinstein). The Germans interned them all. Alekhine feigned psychiatric illness and he was allowed to return home via Switzerland.* The remainder (apart from Bogoljubow and Seles-

* Kosarev, long-serving Komsomol official, liquidated 1939. Tr.

† There are other explanations extant of this repatriation including the use of the passport of a foreign friend and the influence of Alekhine's rich aristocratic family. Tr.

niyev) returned to what was now Soviet Russia in 1918. Consequently Weinstein had an excellent knowledge of German.

"Such a..., such a..." began Weinstein standing in his normal pose. "I've had a letter from Counsellor Genevsky. Flohr is suggesting a match with you."

In fact Ilyin-Genevsky had already agreed matters with Flohr. He was counsellor of the Soviet Ambassador in Prague and naturally kept in touch with Czechoslovak players, including the national champion, Salo Flohr was always marked by an enterprising character. At that time he was the chess hope of the West and was reckoning on an easy victory when he made the suggestion of playing a match with the Soviet Champion.

Nowadays chess players know Flohr as a witty journalist, and that is all, but in the 1930s players trembled before him and compared him with Napoleon. His style of play was very original. Of modern players the closest to him from a creative point of view is Petrosian and possibly Karpov. Unfortunately, when Flohr passed the age of 30 he started to play less well. It seems his analytical powers waned and his capability for self-programming was not properly developed. After the Nazi occupation Flohr came to the USSR and became a Soviet citizen.

Genevsky* now sent two letters, one to Krylenko and the other to Weinstein for me.

Ilyin-Genevsky was an unusual person. He was born in a noble family, was excluded from his high school for revolutionary activity and forced to go to Switzerland to complete his education. There he travelled all the way round Lake Geneva on a bicycle, beat all his chess opponents in Geneva and added the second part of his name. All this was described by him in the remarkable book *Notes of a Soviet Master*. During the First World War he was poisoned by gas, suffered shellshock and for a time lost his memory. He had to learn to play chess again. After his time in the front line he developed a nervous twitch—he would rub his hands together very very quickly with a swinging movement, while at the same time making a spitting motion over his left shoulder. (This sometimes

* Ilyin-Zhenewsky is the normal spelling to indicate the Russian pronunciation. The second part of the name was adopted when he was in exile in Geneva and part of the Bolshevik underground. Tr.

had an unpleasant effect on people who did not know him.) His character was angelic and he was a surprisingly decent person. The only thing he could not pardon was a bad attitude to chess. In 1925 he became a master and several months later at Moscow he won a sensational game against Capablanca. In 1941 he perished from a German bomb at Novaya Ladoga (by Lake Ladoga).

We had a friendly attitude towards each other, although once I did him a really dirty trick. This was in Odessa during the 1929 Soviet Championship. In the quarter-final Ilyin-Genevsky shared third-fourth place, but on tie-break failed to qualify for the semi-final. Then Grigoriov decided to put matters right. On behalf of the tournament committee he assembled all the participants (of whom there were about forty) and suggested including Ilyin in the semifinal provided there was not a single objector.

There was one objector, an 18-year-old youth who declared that the rules were absolute law and could not be broken. Ilyin left Odessa at once. He never reproached me over this action; it seems he appreciated my character. He was delighted with Flohr's suggestion and believed the Soviet Champion would win.

Then Leningrad representatives went to Moscow for a meeting of the Chess Executive Committee of the VSK (The Higher Council of Physkultura). They came back and said that all the Muscovites were trying hard to convince Krylenko that he should refuse the match and agree to a tournament instead.

"Why?", asked a pensive Krylenko. The explanation came that Botvinnik was doomed in a match, whereas a tournament was a different thing altogether, anything might happen. Krylenko's face hardened. "It will be a match" he said, "We have to know our real strength." The matter was settled!

I prepared for the match in old Peterhof in the rest home for scientists. At that time about 100 of Flohr's games had appeared in print, and they were all systematised by me. The opinion was current that Flohr was a player of combinational bent, and played attacks superbly. It became clear that all this was in the past. Flohr had already become a most exact positional player and played the endgame very well. His opening

repertoire was very limited, which eased my opening preparation, I naively thought that I had done my preparation well. Although this was not confirmed in practice, yet 1933 and particularly my match with Flohr marked the birth of the new method of preparation. However, this method came to maturity later!

Krylenko organised the match on a lavish scale. The Moscow half was played in the Columnar Hall of the House of Unions. The players were lodged at the Hotel National and we had an open account in the restaurant. Admittedly in accordance with my principles I fed economically, but when we were paid a visit by a delegation of Pioneers* I ran up a hefty bill.

Flohr was amazed by all this and he seemed to think that Soviet chess players always lived like this. "You have a fine belly," he said to the dismay of his companion Klava Kirsanova. (The confusion arose over the closeness of Slavonic languages. The Czech word *život* has the Russian equivalent *zhizn* in the meaning of 'life'. In Russian *zhivot* means belly or stomach. Tr.)

The interest in the match was immense. The Hall of Columns was full to overflowing, but the wider public was soon disillusioned, since Flohr played with great ease and clearly dominated at the board.

In the very first game I was unable to exploit a prepared opening variation since I had failed to prepare a correct plan to follow it up. I fell into a masked trap when in time trouble and lost.

My old friend Model was summoned from Leningrad. I had worked with this older master as early as 1927 during the Soviet Championship in Moscow. He was accurate in his analysis of adjourned games, and generally speaking was a fine analyst. In 1929-1930 the young people's newspaper *Smena* in Leningrad had run a telephone simultaneous by X (one move a day) against ten strong players of the city (including me). X had made the marvellous score +7-0 = 3. Later on Model admitted that he was X. Admittedly, at critical moments, he would visit his friends and 'help' them to analyse, but this achievement by X-Model was really exceptional. (Krylenko laughed heartily when he heard of his escapades.)

* Pioneer—member of the Party organisation for youngsters of the 10-16 age group, a sort of Boy Scouts, Girl Guide equivalent. Tr.

Model was a bold versifier and decided to mark the outcome of the first game:

Flor dovolyen kak ditya,
khodit imennikom—
v pervom ture on sluzhva
spravitlya a Botvinnikom.

Varyant Panova
navsek razbit.
I moy Mishutka
vodykhatet zharok:
uzhel snova
ya budu bit?

Drezhat kolenyi,
poteryan son
uzhel' on geni, y
a ya pishon?

(Flor is happy as a child, walks about on top of the world—in the first round he coped easily with Botvinnik. The Panov variation is shattered for ever, and my dear Misha sighs in terror: will I be beaten again? Knees are trembling, sleep is lost, can it be he's a genius and I'm a rabbit?)

The next two games were drawn. My mood improved, of course (and not just mine). The fourth and fifth games also ended in draws, but in the sixth a fresh blow of terrible force awaited me.

In the Krause variation of the Nimzo-Indian Defence I got a difficult position, but the game came down to an ending. Carelessly I even offered Flor a draw, but he had two bishops against two knights, and, most important of all, a safe position. Black failed to cope with the difficulties of the defence and Flor recorded his second win. It seemed to be all over. Flor was impregnable; the chess commentators "buried" me and made Flor out to be a genius.

We travelled to Leningrad for the second half of the match which was to take place in the Large Hall of the Conservatoire.

On the 'Red Arrow' train Flor walked to and fro in nervous fashion around me, and finally suggested changing places. "Why?" "Well, you are in seat number 13, my lucky number."

Ah, so you are superstitious? Excellent! "No," was my reply, "I too am superstitious, and I won't give up my seat."

Leningrad. We got out on to the platform. Everybody runs past me and surrounds the grandmaster. We go to the Hotel Astoria where I have a large, cold and somehow uncomfortable room. What should I do?

Ring 82-58. "Mama, hello. You'll feed me, won't you?" "Of course, come along..."

So I am home, 88 Nevsky. A large communal flat, seven families sharing. A narrow 10-metre-long room. When I do my morning exercises I have to stand sideways—if the other way round my fingers would bang against the wall. But here nobody could disturb me, not Flor, not the journalists, nor the fans. I have disappeared. Opposite on the Nevsky lives Model, and I dash over there. Slava Ragozin is already there. They have not deserted me.

Slava starts persuading me, "Misha, the opening variation of the first game is very good. You just went wrong. Let's have a look at it." We worked for several hours, but didn't manage to finish. We decide not to use it in the seventh game; everything should be ready for the ninth—we must be absolutely sure. Flor isn't going to push hard, quite the reverse. Two more quiet draws will convince him of his impregnability and his opponent's helplessness.

By the ninth game everything was ready. My mother and brother decided to come. We went there in a Lincoln. The hall was overflowing.

Flor confidently repeated the moves of the first game, I adopted my prepared line; the link between opening and middle game had been established beforehand.

The critical point of the game: will I find the strongest move Qh4—this was what interested everyone in the press room, but nobody believes in me any more. "Obviously this is the strongest move," says Levenfish, "but will Botvinnik really decide on such a move?"

Of course I did decide on it. At this point of the match I was free from constraint, and was concentrating. Flor put up an inventive defence, but could not save the game. There was a storm of applause. "Very well," I thought, "now we shall see how psychologically stable you are." (See Game 2.)

Flor did not prove to be stable. On the advice of Model and Ragozin I used the Dutch Defence in game 10 with the Stonewall formation.

I knew that Flohr had never had this line of play before, and White has to play actively and skillfully against it. In this unfamiliar situation Flohr played passively and let Black take the initiative. He made an oversight and soon resigned. Now the score was 5-5. The ovation and din in the hall was indescribable. Flohr is not a genius. The critics? They quickly readjusted.

Yes, Flohr is not a genius, but a player of exceptional strength. He played the eleventh game after a very hard simul[†] which went on long after midnight. He was in a difficult position after the opening, but he already knew that there was no retreat. To lose this game would mean losing the match. He mustered his strength and cleverly got a draw.

There remained just one game. Through Weinstein as intermediary Flohr sent the message that since the players had already shown approximate equality of strength he offered a draw in the twelfth game. Of course I did not object. Could I have dreamt of a drawn match on the eve of the ninth game?

This was international recognition of the developing Soviet School in chess. Krylenko, who could not hide his chagrin in Moscow, came to the final banquet.

The restaurant of the Hotel Astoria was packed full—chess players, scientists, lawyers (the influence of Krylenko) and simply acquaintances. The fare was excellent. Krylenko was satisfied—it was not for nothing that nine years earlier he had come to be head of Soviet chess. With his usual eloquence he expressed his inner thoughts. Then he looked at me and continued: "In this match Botvinnik had displayed the qualities of a real Bolshevik!" Well, well! What would Kolya Tarasov say now, the person who never failed to reproach me when I missed a boring meeting? Then the dancing followed. I danced with Galya Ulanova* (she had been invited to the banquet by Rokhlín). "I never thought chess-players danced," she said. I could not say anything to her; she danced the foxtrot badly.

I danced the foxtrot and Charleston at the level of professionals. For many years I went to dance halls every Saturday with Nina Dityatyeva

* Galina Ulanova, famous prima ballerina of the Bolshoi Ballet from 1944. Made her debut on the stage in Leningrad in 1928 at the age of 18. 77.

(I was in the same class at school with her sister Lelka; she died along with her frontier-guard husband on the very first day of the war). Nina was the one who had taught me how to dance. At first I couldn't manage the Charleston—it's not so easy to turn with both legs at once. I employed some guile—I trained methodically for a couple of months in front of a mirror and created my own style whereby the legs work in sequence, but it was practically impossible to notice. Nina immediately caught on to the new system and at dances everyone watched our performance with respect, naively thinking that this was the latest thing from the West...

The next morning I went to the Astoria to thank Krylenko and say goodbye to him. Krylenko sat me down, took my photograph and later sent me the photo as a memento.

When I was saying good-bye to Flohr he gave me a photo of himself with a dedication "To the new grandmaster with best wishes for further success." It would seem I carried out his instructions. I became a grandmaster only eighteen months later.

We accompanied Flohr to the station. He was to cross Europe by train to get to the Hastings tournament. No one thought that this tournament would go down in history as marking the end of Alekhine's superb string of victories. In the seven years since he had taken the world title he had not known a single reverse, but at Hastings he shared second and third places, half a point behind Flohr.

The House of Scientists arranged a disputation on the creative results of the match. Friends told me that I was going to be attacked by the 'older generation'. That is how it was. Levenfish and Romanovsky, who had lavished praise on Flohr after the Moscow half of the match, now criticised me for the level score in the match, for my carefulness and the abundance of draws.

I told the audience about the behind-the-scenes side of the match, about the psychological side of the struggle, about Flohr's impregnable style and so on. At the end I could not restrain myself and recalled the result of the Bogoljubow-Romanovsky match in 1924 (6½-2½). "Pyotr Arsenyevich," I asked Romanovsky, "it would seem that you played correctly then from the creative point of view. What sort of shape would Soviet chess be in now if I had played against Flohr à la Romanovsky?"

About a month later (an unheard-of speed of production) a book of the match appeared with my notes to the games. In an introductory article I described my preparation. This was the first published work about the method I was developing. The second account came five years later when the method had been worked out in all its finer points.

In conclusion, though, I had to swallow a bitter pill. The postgraduates of the Electromechanical Department were the responsibility of Professor Tolvinsky, one of the leading specialists in electrical machines. At the end of term he assembled the postgraduates in the large assembly hall (later given the name of Academician Mitkevich) and summed up the results of their work. "Everything has gone well, all the postgraduate students have successfully fulfilled their plans, apart from two. One of them was ill. The other one was called away for . . . a public entertainment!"

CHAPTER 3.

Postgraduate Study

My POSTGRADUATE period dragged on. I was playing chess, but I passed all my exams. Since the Institute had given me weak general preparation Goriev made me study mathematics and mechanics. Moreover, I had to pass in philosophy.

Everything was in order with mathematics. Professor Ivanov (the senior Professor who gave his lectures to us on the ground floor in the lecture theatre which was later to bear his name) was pleased with me, gave me a five,* and, when he knew to whom he had given it, he spoke flatteringly about chess.

With mechanics it was worse, but Professor Lurye, one of the leading Soviet specialists in the field, had an affable attitude towards me. With philosophy it was very bad; I flunked on the accidental and the necessary. Then I learned off by heart Engels's definition (from *The Dialectic of Nature*) and went to take the exam again.

"Well then, have you studied the question of the accidental and the necessary" I rattled off the definition, but added honestly that I had not understood the sense of it. The philosophy lecturer, it seems, did not feel very confident himself about this [point, diplomatically gave me a four and we parted on friendly terms.

One of the most significant tournaments of my postgraduate period was the Second Moscow International of 1935. The interest in it was immense; on the first day about 5000 spectators turned up, but there was little order. After that Kosarev, Secretary of the Central Committee of

* Top mark in the school/academic marking scheme in the USSR. 7).

the Komsomol, insisted that fewer spectators should be admitted. We played amongst the sculptures in the Museum of Elegant Arts (the present-day Pushkin Museum), but this was not a bad idea. For sculptures they always build halls with a high cubic capacity.

We stayed in the Hotel National, and I had a fifteen-minute walk to the rounds—an excellent stroll. Once I finished up in an awkward position because of this walk. Just before my game with Capablanca I was halfway there when I remembered that I had left my playing spectacles in the hotel. I hurried back for them and was about ten minutes late for the game. Capa had an obviously offended look on his face, but when it was all explained he smiled (he too already had playing spectacles by this time).

After the round the young players would show their games to Lasker and Capablanca, normally in the restaurant. At the start of the tournament I kept winning nearly all my games, and, when my game with Alatorsev ended in a draw, I kept asking Lasker where White had missed the win. Lasker listened patiently to my comments, but finally flared up: "What, you ought to win every game?"

Lasker was 66 years old. He had a strong wise head... and a body that was already weak. He played skilfully, avoiding complicated positions and exchanging pieces. He was good at this when he was young, but in those days was not so keen to agree a draw. He went through the tournament without a single defeat, a phenomenal achievement!

Capablanca was already ex-world champion (having yielded his place on the chess Olympus to Alekhine) and this had wounded him. He played some games with amazing mastery, but what struck me most was his swift and accurate assessment of the endgame.

During the tournament there was an episode which was possibly not much to my credit, but it happened....

Lasker's game with my friend Slava Ragozin was adjourned with advantage to the old doctor. We 'worked over' the position conscientiously, since there was a danger that Lasker would finish in first place! Finally we found a draw 'in all variations' but for safety's sake we decided to consult with Capablanca (who was also in contention with Lasker). Obviously we ought not to have done this. Capablanca received us in his hotel room. While I demonstrated the analysis to him he would nod his

head with a half-smile, but suddenly he stopped me and claimed that White would lose a simple endgame position which Slava and I considered quite defensible. Against Capa we could not save this ending! In the adjourned session the game ended in a draw at once since Lasker overlooked a clever trick.

Finally we got to the last round. Flohr and I were level, I had to play Black against Rabinovich, Flohr had to play Alatorsev.

There was a knock at my door and Krylenko came in.

"What would you say," he asked, "if Rabinovich were to lose to you?"

"If I realise that he is giving me the point then I will myself put a piece en prise and resign the game on the spot."

Krylenko looked at me with obvious friendliness. "Well, what should be done?"

"I feel that Flohr himself will suggest that both games should be drawn, after all he did something similar during our match." Then I gave a cunning laugh, "Moreover he might be frightened that Rabinovich will 'throw' the game."

At that point Weinstein came in: Flohr was offering two draws. Krylenko beamed. Rabinovich gave his assent, but Alatorsev jibbed at it.

"Let him play," said Flohr "It will be a draw."

Play began. Despite the Krylenko's ban on it I was the first to offer a draw.

Flohr's task was more complicated, since Alatorsev had actually fallen into a difficult position, but the honourable Flohr made a draw.

So Flohr and I were first with Lasker half a point behind. In the last round he had scored a superb win against Pirc. Krylenko had consultations with the two ex-champions asking what would be their attitude if Botvinnik was awarded the grandmaster title. Capa and Lasker were in favour. I was against and stated that titles were not the point.

My friends, chess players of GUUZ (the Main Directorate of Academic Establishments) of the People's Commissariat of Heavy Industry, made representations to Ordzhonikidze* about awarding me a car.

* Sergo Ordzhonikidze, Commissar for Heavy Industry and an old friend of Stalin. Died 1937 in suspicious circumstances. Tr.

This became known and some people tried to persuade Krylenko to oppose this so as not to spoil Botvinnik: just imagine, both a prize and a car!

Krylenko hesitated, but still phoned Ordzhonikidze and explained that there was money (the prize) for a car in the chess section. Would Comrade Sergo give permission for purchase of a car?

Ordzhonikidze immediately sized up the situation. "Comrade Krylenko, I have both the money and a car. We shall decide this matter ourselves." As a result I became a car driver. Moreover, Ordzhonikidze raised my postgraduate grant from 300 roubles a month to 500.

At the beginning of 1936 I wrote a letter to Krylenko in which I analysed the results of the 1935 international tournament and suggested a new tournament in Moscow. The essential point was that the 1935 tournament had included both strong grandmasters and comparatively weak masters. It was hard to judge the genuine strength of players on the results of such events. It would be a different state of affairs if only strong players took part and the event was repeated—a so-called match-tournament. I further proposed inviting five strong foreign grandmasters to the new event and selecting the five best Soviet players, arguing that this would be a real test of our strength and good training.

Obviously here too there were objections. It was easier to select ten to twelve Soviet players than five—each master had his own supporters. However, as a rule, Krylenko did not take account of egotistical interests. He sent me for negotiations to Kosarev—with the support of the Central Committee of the Komsomol it would be easier to get authorisation for the tournament (considerable expense was involved).

Kosarev received me straight away and after the necessary explanations announced his unconditional support. The permission of the government was obtained.

The players invited were Lasker, Capablanca, Flohr, Lilienthal and Elisaskes, and from the Soviet side four young players (Botvinnik, Ragozin, Ryumin and Kan) as well as one from the older generation (Levensfish).

Unfortunately the tournament started later than envisaged, it was very hot in Moscow in June and it was difficult to play. The event took place

in the Hall of Columns of the House of Unions but, alas, there was no air conditioning as yet in the hall and with more than enough spectators it was hard to breathe. At night too it was hot, I got over-tired and for the first time in my life I suffered from insomnia. Only the war cured me of this!

Still, I had to play chess. I had been away from practical play for more than a year, but I was in an optimistic mood. Ragozin and I prepared very well in the Zachrenye opt-home near Leningrad, and played good training games.

In round 7 there was a catastrophe. I got a winning position against Capa and on move 28 could have got an overwhelming material advantage, but I fell into time trouble and Capa punished me in accordance with all the rules of the chess art. He became the sole leader. The remainder of the tense fight did not make any change in the 1 point margin between us (we both scored 8 out of 11) and the Cuban took first prize!

The day after my loss was a free day. In my grief I went to MKHAT (the Arts Theatre) to see 'The Marriage of Figaro'. The actors Androvskaya, Zavadsky and Prudkin performed with élan. I rocked with laughter and my cares were forgotten. During the interval I heard a male voice behind me, "Botvinnik is sitting in front of you." and then in answer, "But he lost yesterday, how can he go to the theatre?" from some surprised schoolgirl.

This time the Soviet participants played better than in 1935. The foreign players did not demonstrate any obvious superiority and the test was a serious one. The aim of the contest was achieved—confidence in the strength of Soviet players was established and one could look to the future with hope.

That is the way that young players should act if they want to progress; they should not go chasing after material benefits, but rather after hard events. Now there was another tournament. The English had acted in good time. It was already known in the winter of 1935 that there would be a tournament at Nottingham. When they had collected the tournament fund, or simply speaking the money, they sent out the invitations. I got an invitation in the winter of 1935.

The question of my participation did not raise any doubts with Krylenko as I already had successes in international events. Krylenko got

everything cleared early on, got the necessary permission and sent a favourable reply to England. Only one thing worried him—what should he do to help the Soviet champion to succeed.

Chess players both feared and loved Krylenko. He was abrupt, acted in direct fashion, but fairly, and when necessary, delicately and in very subtle fashion. At meetings of the Executive Committee of the Chess Section of the All-Union *Physkultura* Council he did not impose his will, but he showed his power when he realised that sectional interests were taking over. He often conducted meetings standing as if to compensate for his lack of height. A shaven head with sharp facial features, penetrating eyes, fluent careless speech with aristocratically burred pronunciation of the letter 'r', invariably dressed in service jacket and leggings—this was the exterior of one of Lenin's popular comrades-in-arms. By this time Krylenko was widely known in foreign chess circles as the 1925, 1935 and 1936 Moscow international tournaments were all played under his direction.

"Nikolai Vasil'yevich, would it be possible to send my wife with me?" This was a difficult business. At that time people rarely went abroad, and as for their wives, that was out of the question.* But Krylenko had seen that when my wife came to Moscow for the last rounds of the 1936 tournament my results had improved.

At the start of July I was summoned to Moscow. "I have phoned Comrade Kalinin (Head of State. *Tr.*) and explained everything and Mikhail Ivanovich has given a positive decision to the question", said Krylenko as if by the way. Then I was handed straight away passports, tickets and currency. It was a sizeable sum of money, a travelling allowance and something like £100 sterling, just like the People's Commissars got. All this, of course, had been lobbied for by Krylenko.

At that time banquets were arranged on any pretext—they were forbidden later on. Although there was still a fortnight to go before I went abroad a farewell supper was arranged for about twenty people at the National!

* Soviet players have hardly ever been authorised to go abroad with their wives, Botvinnik and Petrosian being the exceptions. Spassky's wife came out to Iceland at the halfway stage of the 1972 match with Fischer. *Tr.*

Next to Krylenko sat a young-looking and affable comrade. It turned out that this was the Deputy Director of Agitprop* of the Central Committee of the Party, Angarov. When he wished me goodbye in a cordial fashion Krylenko asked Angarov to drive me to the Leningrad station. While we were going along in Angarov's official car, a Buick, he continued discussing the forthcoming tournament.

"What a terrible thing, chess!" he finished up exclaiming.

"Why?"

"Well here we are wanting to help you," he said sadly, "yet how can we do this?" We laughed and shook hands.

As always there were more than enough forecasts before the event, and they were basically pessimistic. Levenfish, for example, made a bet that Botvinnik would finish no higher than fourth, and in any event, would be below Bogoljubow. Only one far-sighted person made an accurate forecast (shared first place between Capablanca and Botvinnik)—this was Ilyin-Genevsky.

It was a hot July day and we had left our raincoats at home. We suddenly remembered about them when a storm arose in the Gulf of Finland. It grew colder and the motor ship *Siberia* rolled about in the waves when we were already well out of Leningrad. This vessel was built in the Baltic yards with a displacement of just 6000 tons and a speed of 12 knots. (In the Great Patriotic War it was fitted out as a hospital ship and was soon sunk by the Fascists.)

At that time the ship made direct trips to London the whole journey lasting four and a half days. The vessel was jam-packed with passengers. Here there were foreigners and Soviet citizens, emigrants from the countries where Fascism had triumphed and rich tourists. There was a large group of Soviet electrical engineers who were setting off for six months, practical work in England. Amongst them was a woman engineer from Kharkov and a middle-aged English couple kept asking my wife, "How is it possible that a wife can leave her family for six months? Would your husband let you go for such a long time?" The English intelligentsia had their own ideas about life.

* Agitprop—Agitation and Propaganda Section, responsible for spreading Party propaganda amongst the masses. *Tr.*

We passed calmly through the Kiel Canal, though there already was a feeling of tension—the Civil War was on in Spain. Children shouted "Heil Hitler" at us from the banks. They fell silent with surprise when anti-Fascist emigrés replied, "Heil Moskau."

We sailed through the North Sea. Captain Sorokin invited us to his cabin. Everybody in the Soviet Union knew about the tournament in Nottingham and the sailors were no exception. A lighthouse appeared on the horizon. "That is Sunk", explained the captain. "It's already the English coast, but you can sleep soundly, we only go into the Thames with the high tide, as we won't be in London earlier than 8 a.m."

We woke up due to the thunder above our heads. There was already life on deck, although it was not yet 6. It turned out it was London—the tide was early.

We finished our journey in good order. How different it had been two years earlier when I travelled to Hastings all the way through Europe in a sitting compartment with several changes of train! I was so worn out that sitting on the deck of the Ostend-Dover boat I had slept like the dead. I had woken up when the boat was already moored. I took my luggage and went with the other passengers to the passport control. My turn came, but a tall bobby kept trying to tell me something after he had looked at my red leather passport. At that time English was double Dutch to me. Finally he took me on one side and started letting the other passengers through. What should I do? This way I would miss the Dover to London train.

In this difficult situation I had a happy thought. I took out my invitation from the Hastings Chess Club. The picture changed at once! The bobby took a form and filled it in for me (this is what I was missing—on board ship they had offered me some sort of card, but I had unwisely refused it!) Then with a bow he walked several paces with me and indicated where my train was waiting. The passengers looked on with respect—they probably thought that in the shape of this young man was some big noise. It was quite simply that the officer was a chess fan!

There were several days before Nottingham began; this time I had arrived early. In January 1935 in the self-same London I had visited Lasker and discussed my bad result in the Hastings tournament. When

Lasker found out that I had arrived in Hastings two hours before the first round began he shook his head. "For acclimatisation you should arrive about ten days before..." Krylenko had applied the ex-champion's advice this time. Although I was hurrying to Nottingham I had to get some clothes for my wife and we spent a day in London. I came to our Embassy as if it were my home: after the Hastings tournament the Maisky's received me as if a son. Ivan Mikhailovich Maisky was Ambassador in London for many years including the difficult war years. I fully appreciated Maisky and his wife Agniya Alexandrovna when they supported me quietly and cordially after my setback at Hastings. At that time M. A. Sholokhov* was in London and in the interesting conversation I forgot about my sorrows.

This time Ivan Mikhailovich was on holiday back home and the counsellor's wife took us under her wing.

My wife was already fixed up with hats—the hat shop of Sophie Lapidus was popular in Petrograd even at the time of NEP (New Economic Policy—the period of the early and mid-1920s when the more rigorous controls on trade and profit were relaxed, and private enterprise was permitted. *Tr.*). Now she worked from an atelier at No. 12 Nevsky (this atelier was well known in Leningrad under the name of 'death to husbands') and had made two enchanting creations for my wife. We simply had to buy a costume for her though. We went to a department store (Selfridges, I think) driven in the Ambassador's car by an English chauffeur. At that time the trade unions insisted that the Soviet Embassy took on local drivers to cut down unemployment.

"The two piece is very good," said our companion, and the young lady sales assistant nodded her head in assent. "Put it by, please, and we will call in later." Our guide decided that we should look for something more elegant. We decided to drive to another shop, went out to the street, but there was no car waiting. The driver had gone off for lunch at 12 o'clock in accordance with his conditions of employment.

We went round about ten shops, but the 'two piece' was out on its

* Writer, winner of the Nobel Prize for Literature, author of *The Quiet Don*, etc. *Tr.*

own. We went back to Selfridges where we had to tear our sympathetic assistant from her cup of tea—nobody else knew where the costume was. For a few minutes mutual expressions of thanks rang out in the air, everybody smiled and for five pounds my wife became the owner of an elegant beige costume. It never wore out, and twenty years later our daughter was still wearing it when she went on holiday walking tours.

We boarded an express train which was to make just one stop *en route*, at Kettering. It rocked about with frightening force as it went along the track right next to houses and trees with no safety zone in between; through the windows everything flashed by. My wife became slightly disturbed. A middle-aged Englishman who was sitting opposite gave her moral support, "Yes, it's a very fast train..."

Two hours later we were in Nottingham at the Victoria Station. The hotel of the same name was right by it.

We were given a smart room. Disregarding my wife's advice I turned down full board. It's no joke paying at three times the rate for the two of us to stay a week, quite contrary to my principles. We went to have a meal nearby at the 'Milton' cafe. We ordered and started eating. However, when the spinach started crunching on our teeth (or rather not the spinach, but the sand on it) my wife asked, "Possibly we should take our meals in the hotel?" There they fed us superbly, so the People's Commissar rates of expenses came in handy!

The next day we were told that Mr. Derbyshire, President of the Nottinghamshire Chess Association, had invited us to spend a whole day at his country estate Rempstone Hall. His son called for us in his sports car. He drove at a furious pace with the noise of shingle spurring under the wheels. A thick layer of this fine stone covered all the roads on the estate.

The house was an old building and Derbyshire, it seems, had only recently acquired it. We were introduced to the master of the house who was due to celebrate his seventieth birthday in a few days time. His wife was about fifteen years younger than him, and his mother-in-law was 82. This sympathetic grandmother straight away fell in love with my wife. The questions came thick and fast: "Which church were you married in? Is it true that in the USSR they take the children away from their parents?"

Is that hat really from Moscow? What, you dance in the ballet?" and so on.

Derbyshire showed us one of his chess trophies—superb Staunton pieces kept in a glass case. Fifty years previously at the Nottingham Chess Congress he had won first prize in one of the subsidiary tournaments. To mark the anniversary he had decided to run an international tournament with the participation of four world champions: Lasker, Capablanca, Alekhine and Euwe. Derbyshire had announced that he would contribute half the tournament fund if the other half could be collected from amongst British chess supporters. This was duly done and now the tournament was about to start.

The host's wife sat at the wheel of her car (the gear lever was on the wheel, a rare feature at that time), next to her was my wife, while Derbyshire and I were in the back. We drove to an annual fête organised by a local landlord. There was no end to the number of cars there, some people climbed on to the roof of their car to watch the spectacle in the fresh air. However, Derbyshire led us to the terrace of the house where the select company was gathered. A huge bobby stood on duty with his back to us, legs apart, blocking the entrance. Derbyshire tapped him on the shoulder with his cane. The policeman unhurriedly turned round, recognised a member of the local magistracy, and allowed us to pass. When Derbyshire presented us to anyone he always added, "staying at the Victoria Station Hotel". This indicated that we were well-to-do people and explained our presence on the terrace.

We returned to Rempstone Hall and settled down to dinner. We were having chicken. Everything went well, but for the fruit course (grapes the size of apples—from the local greenhouse) we were provided with silver bowls of water on which small flowers were floating. We decided to wait and see what the others would do with them. A trifling matter—it turned out you rinsed your fingers in the bowl after eating.

Then a polite good-bye and we were driven back in the host's immense limousine. It was good that there were a few more days to go to the tournament, and I could concentrate on the main thing—the chess!

Gradually the other players turned up. Emmanuel Lasker had not stuck to his normal rule and arrived later than me. He was almost 68

years old—a great deal, or not so much, all depending upon how a person looks, and what work capacity is there. Lasker looked badly, and moved with difficulty. It looked as if he had no teeth, since sometimes his nose, looking like an eagle's beak, almost came down to his chin. At the board, however, he was cold-blooded and far-seeing. Recognising that his strength was ebbing he normally played for simplification and did not object to draws.

When Lasker saw Bogoljubow with the *Berliner Tageblatt* he became animated and became engrossed in reading it himself. A photographer came up and asked Lasker to pose for him. Lasker, made a show of throwing the paper to one side, declaring "I can't be photographed with a Fascist newspaper." In Nottingham, as at the 3rd Moscow International tournament, Lasker did not have much success, but he had a considerable influence on the course of the struggle here. For a long time world champion Euwe was in the lead and I could hardly keep up with him. At this critical moment Lasker came unexpectedly to my room. "I am living in Moscow now" (Lasker lived in Moscow for three years after the Moscow tournament*), he announced solemnly, "and as a representative of the Soviet Union I consider it my duty to play for a win tomorrow against Euwe, since I am White..."

I waved my hands and said, "What's this, my dear doctor, if you make a draw that would be fine."

Lasker gave a sigh of relief, "Well, that's a simple matter," he said, and shook hands before going. The next day Euwe, in going for a win in a level ending, overlooked a tactical finesse and lost.

By this time Capablanca was not so handsome as in his youth. He had filled out a little, and the sparser hair had flecks of grey. Yet he was still charming. The summer of 1936 was the high point of his later chess activity, and not just the chess. He was attracted at the time by the widow of a Russian emigré, Olga Chegodayeva,† whom he subsequently married. In Nottingham he sometimes appeared in her company.

Capablanca was not professionally involved in chess. His talent was so

* i.e. from 1935. *Tr.*

† The first draft of the memoirs (1971) described her as widow of a White Guard pilot officer. *Tr.*

great that he was confident in himself, confident that he would always react correctly in the situation he found himself in. In his youth that was the case, but with the inevitable fading of his analytical powers Capa started to think about chess not only during a game.

During tournaments he examined the opening systems adopted and found new ideas. The orthodox Capa changed for the better; he managed to find much that was interesting in the Nimzo-Indian Defence, in the Reiz Opening, in the Sicilian Defence and so on.

Nottingham was just the tournament for Capablanca. The quicker time limit (36 moves in two hours), the tight schedule (the absence of adjourned games days), all favoured him since it reduced the significance of preparation and increased that of mastery at the board in which the Cuban excelled. In our game at Nottingham when a draw was already obvious I carelessly exchanged pieces and offered a draw in a queen and pawn endgame. Capa refused at first, and to my horror I realised that I stood worse and faced an uphill struggle to draw. Possibly the young Capablanca would have started playing for a win, but the middle-aged Capa thought a little and then accepted the draw. Then we analysed the game and Capa gave me a lesson in queen endings. With what mastery he centralised his queen and king, not worrying about the loss of a pawn. However, it seems I defended satisfactorily since after half an hour Capa extended his hand: "Yes, a draw was inevitable!"

"You couldn't have won", I said (he flared up at once). "I am 25 years old today." Capa beamed and gave a sweet smile. Generally speaking the Cuban was a very worthy sportsman, but he did not refuse any accidental opportunities. Thus, his game with Vidmar, in which the Yugoslav was White, was put off because of Vidmar's indisposition. True, when I went into the restaurant after the round I saw Vidmar eating with a good appetite, although we had been told that the professor had an upset stomach. The postponed game was due to be played on a rest day, but Capa refused point blank: "I did a favour for a colleague who was unwell; surely Vidmar must understand that it is out of the question to cancel a date with a lady?" As a result the game was played off at the end of the tournament when the Yugoslav's affairs were in a bad way, and he lost it without a fight.

So, the last round. Capa and I were level. I was playing a weaker player, Winter; Capablanca—with Bogoljubow. After a few moves had been made Capablanca put his arm round me and we strolled together round the hall. "You have a good position, and I have too," he said. "Let us both have a draw and share first place." Well, I thought to myself, you are a cunning one. Winter is no Bogoljubow. So I parried the blow by saying, "Of course I am prepared to accept your offer, but what will they say in Moscow?" Capa just raised his arms wide.

Yet I had made a great mistake. First of all I had played a punishing game against Euwe till very late the night before; secondly the last round started early in the morning and a change of routine is an unpleasant business. With each move I kept losing more of my advantage, and in the adjourned position would have to lose a pawn. The instinct of a practitioner prompted me to offer Winter a draw. He of course accepted.*

How was Capablanca getting on? Alas, he was the exchange up. My wife was in tears. "Why are you crying?" "Now that the tournament is over I can cry..." "You know, the break is already over, let's go and see, possibly Bogoljubow has held on."

We went over to the demonstration board—the position was an obvious draw. At the board Capablanca and Bogoljubow were already analysing the endgame. I complimented Capa and thanked Bogoljubow.

"What's this?" said Bogoljubow with an expansive gesture of his arms, "I wanted to win it, but I couldn't." Bogoljubow showed himself a true sportsman. He appreciated the fact that I did not single him out (just as was the case with Alekhine too) amongst the other players.†

During our game Bogoljubow did not press his clock button hard enough, so my clock did not start. I drew his attention to this straight away.

Once Bogoljubow announced to his partners in a game of cards, Vidmar and Tartakover, "You are all putzers. I lose to you just by chance." Then he saw me and added, "But to him—not by chance."

* Winter was a committed Communist, and his acceptance of a draw in a favourable ending was interpreted in an unfavourable way in English chess circles. *Tt*.

† As players who had emigrated (or stayed abroad) without permission the two were reviled in the Soviet press as 'renegades' and so on. *Tt*.

Yefim Dmitriyevich and I parted in friendly fashion. He had, alas, become thoroughly German, spoke Russian with an accent, and even laughed in a German way.

But back to Capablanca. Both of us were friendly with Prokofiev. Capa was acquainted with the famous composer from as long ago as his period in Paris. I knew him from Moscow after his return to his native land. Naturally at the end of the tournament I got a telegram of congratulation from Sergey Sergeyevich. I saw Capablanca just as the porter handed me the telegram, and I showed it to him. Capablanca went pale and gave a twisted smile. What a real insult, Prokofiev had not congratulated him. Two hours later Capablanca sought me out and, beaming, showed me his telegram. Obviously Prokofiev had sent both at the same time, but the telegraph people in Moscow had decided that the congratulations of the great composer should be received first by the Soviet player.

The next day was the day of departure, and I was settling up the bill for the last week's stay in the hotel. "Excuse me," said Capablanca, curious, "what is it that you are paying for?" I explained that the tournament committee was only paying for me, but that I was paying for my wife. Capa was amazed. The point was that the foreign competitors who had come with their wives were enjoying full hospitality. The foreign grandmasters, in addition, were getting £100 each, and the world champions—£200. Capa knew that I was getting nothing, but the fact that I was paying for my wife, and also for a room with a bath (the tournament committee was paying me for a room without bath) exasperated him. He raised a fearful hullabaloo and fell upon poor Vera Menchik-Stevenson since she was the wife of the tournament treasurer Stevenson.* Up came the distraught treasurer and as a result my money for the last week was returned to me—Capa was happy.

Alekhine seemed nervous when we were introduced. I pretended not to notice anything. He was thin, jerky in his movements, and his eyes flickered from side to side. He was still drinking, and lost to Reshevsky

* In a letter to the magazine *Chess*, March 1972 number, W. Ritson Morry points out that Miss Menchik did not marry R. H. S. Stevenson till after 1936. *Tt*.

only because he drank a whole bottle of wine over dinner when the game was adjourned. Yet he was a Chess Player with capital letters.

Our genuine introduction to each other took place at the chess board. In a variation of the Sicilian Defence Alekhine had prepared a very dangerous line. It was not in accordance with my principles to avoid my own variations and Alekhine managed to make use of his 'home-brewed recipe'. He was a shrewd psychologist and knew how important it was to exert moral pressure on the opponent, so right up to the critical moment he played at lightning speed, circling round the board (and his prey) and sitting down at the board only for a moment in order to make his move quickly. He had to try and suggest to his opponent that in the quiet of his study everything had been worked out to the end and resistance was therefore useless.

I thought for about twenty minutes and found salvation. True I had to sacrifice two knights, but a draw by repetition of moves was guaranteed. I sacrificed the knights, but before repeating moves I thought a little—there was no risk for me any longer. My goodness, what came over Alexander Alexandrovich. He had overlooked Black's counter-play in his analysis, and when I started thinking he decided that there must be something else he hadn't seen since I was in no hurry to force the draw. His tie became undone, his button-on collar curled up on one side, his thinning hair became dishevelled. When we agreed to a draw he became marginally calmer, but then straight away took on a pose, and claimed that he had found the whole line at the board. I was already an old hand, and obviously didn't believe him. (See Game 3.)

Alekhine was well disposed towards me. After the tournament he forecast great success for me in the *Manchester Guardian*. "Botvinnik has a feeling for danger", he wrote.

Alekhine played certain games at Nottingham with great force, for example a technically difficult game with world champion Euwe was superb.

Max Euwe was 35 years old. He came with his wife Caro and the four of us occupied the same table in the restaurant as long as Euwe was tournament leader. When the leadership passed to me the Dutchman sat at another table.

Dr. Euwe had already begun to study Russian then. Once Bogoljubov was going past us. Euwe called him over and said in Russian "Ya khochy uchitsa govorit' po-russki" (I want to learn to speak Russian). Bogoljubov waved his hand dismissively: "All the same you won't learn." "Shvinya"⁵ was the doctor's answer.

Nowadays Professor Euwe is an exceptionally delicate and sensitive person, but then, because of his youth, he was sometimes intemperate. The champion of Nottingham was a certain Haddon who had a sword scar on his cheek. "Anything at all, only not war," was what he used to say. Haddon was an engineer at the well-known chemical firm 'Boots'. He had a good standard of living and had a standard two-storey house with garage and rear garden in the suburb of Silverhill.† He had a fox terrier which looked as if it had just jumped out of the pages of Jerome K. Jerome.

"We don't have many dogs like that in the USSR", I said to him.

"Yes," commented the world champion in passing, "you ate all your dogs long ago." I looked so put out by this remark that the doctor apologised straight away and we were reconciled.

May the professor, who is my close friend, pardon me, but at that time not everything was in order with the young world champion with regard to sporting ethics. In the penultimate round we played a tense game. The initiative was on the side of the champion, but I managed to adjourn the game in a fairly level ending. In my analysis I satisfied myself that it was a draw, and since the last round was early the next morning I decided to offer a draw to conserve my energy.

"Yes, of course," was the doctor's answer to me, "but how did you propose drawing it?"

I understood that the draw was accepted once my opponent was interested in my analysis and I showed the prepared variations to the champion. Then, without saying a word, Euwe took my pocket set and disappeared.

⁵ I.e. the Russian word for 'pig' or 'swine' but with a German pronunciation 'sh' instead of 's' (cf. *Schwein*). *Tr.*

† K. Whyld has established that the house was called Silverhill and was located in the suburb of Mappetey. *Tr.*

I started to feel nervous: what does all this mean? Five minutes before the resumption of play Euwe gave me the set back, saying, "I'm very sorry, but my last hope for first prize lies in winning this game." Play began and two moves later the opponent corrected his mistake by offering a draw, but I shook my head in refusal. In the end it was a draw, but I was close to losing it!^{*}

In those days Euwe played with great force and was a worthy champion. Anyone could have lost a match to the Alekhine of 1937 (when he had completely re-established his competitive form).

Sir George Thomas was fully in the style of the heroes of Dickens—grey, tall, slow-moving, with a moustache, an invariable gentle smile and slightly thrown-back head.

He seemed quite well-off since his old car, trimmed with red wood, had its own driver—he gave me a lift once after a game, from the university where we played, back to the hotel. When British players had to get together half the tournament fund Sir George gave fifty simultaneous exhibitions to help raise the money. Like all four Englishmen he had little success in the tournament, but fought to the end. We had a pretty curious adjourned endgame in connection with which Capablanca had some hopes, since I had lost my previous game with Thomas at Hastings. When we got back to the hotel Capa was playing cards, but catching sight of Thomas threw a questioning glance at him. "There was nothing to be done", indicated Sir George with a wave of his hands and the card game was renewed. Thomas died when he was over 90.

One other Englishman, Tylor, a very eloquent lawyer, was blind. During play he suffered away; as I remember it he incessantly fingered a special set of pieces, and he also had a device for counting the number of moves made.

The political situation was very unpleasant then; the British press was

^{*} When an extract from the initial draft of the memoirs appeared in the magazine *Chess* in 1971 Dr. Euwe reacted (see *Chess*, March 1972) with a denial of this story of the adjourned game, attributing it to a misunderstanding because of the language barrier, and saying that Botvinnik had authorised him to publish this rebuttal. Nevertheless Botvinnik gives the same version in the 1978 memoirs of which this is the translation. *Tr.*

conducting an intensive anti-Soviet campaign.^{*} A counsellor at our Embassy said to me, "It's a good thing that the tournament has finished so well. We'll arrange a reception for the players so that something good can be written about the Soviet Union."

The reception took place and Lasker, Capa, Flohr and Vera Menshik were there. That is when they took the photograph showing me standing with Lasker and Capablanca; we are drinking tea and laughing at something. However, the aim was not achieved. What appeared in the press was: "When we asked the counsellor about the political situation he replied with the question 'And what do you say about the result of the Nottingham tournament?' " The counsellor was very distressed about this.

We travelled to Paris with Mousouri. Mousouri was a Greek subject, but lived in Moscow and worked on the chess newspaper *64*; he also composed problems. When Krylenko received permission in Moscow to issue a special bulletin devoted to the tournament he had to send a correspondent urgently to Nottingham. It was simplest to do this by sending Mousouri since he was a foreigner. So Mousouri was in Nottingham where he worked tirelessly sending a lot of material to Moscow. When Capa travelled to London by train with us Mousouri persuaded the Cuban to dictate the notes to two games.

In Paris we spent the night at the Embassy and early next morning a TASS correspondent turned up to interview me. "What can you say about being awarded an order?" asked Comrade Palgunov (later to be general director of the news agency). "What order?" "What, don't you know that you have been awarded the order 'Mark of Honour'?" This was a great honour!

We took a train in the morning and by evening we were in Berlin. Here too we spent the night at the Embassy. The next day there was a celebration dinner with the ambassador Surits. For some reason every-

^{*} The Nottingham tournament ran from 10th August to 28th August. The Spanish Civil War had broken out on 18th July. On 19th August the show trial opened in Moscow of Zinoviev, Kamenev and fourteen others charged with plotting with Trotsky, murdering Kirov and attempting to murder others such as Stalin. All sixteen were condemned to death on 24th August and shot the next day. *Tr.*

body else there kept silent and concentrated on eating, while the ambassador was animated and told us about this and that: that Nemirovich-Danchenko* is taking a cure somewhere near Berlin and has been following the tournament closely through the emigré newspaper *Pasledniye Novosti* (the chess column of which was run by master Evg. Znosko-Borovsky who has been present at the tournament). There were various stories, amusing tales and so on from the ambassador. Sometimes Surits would ask me a question, but I had hardly had time to open my mouth before he rattled on about something else. Then I realised why everybody kept quiet and I settled down to eating.

From there onwards events speeded up. At Negoreloye I was met by journalists and photographers, at Minsk there was a huge crowd of chess players on the station platform and at Moscow a formal meeting on the square outside the Biclourussia Station. Then an evening party at the Green Theatre, another party at the Central Institute of Aero-Hydro-Dynamics and the leading article in *Pravda*.†

Krylenko received me, was very pleased and asked me in detail about the tournament. "We sent your letter addressed to Comrade Stalin straight away to his dacha, and a resolution was passed immediately 'to be published,'" said Krylenko.

Actually Krylenko organised all this. At that time everybody wrote letters to Stalin about their achievements. Krylenko had studied me thoroughly and realised that I would not write a letter myself out of modesty, yet the absence of a letter might do harm to chess. When I was still in London I was called to the telephone by D. Ginsburg, a reporter on *64*. "We have received your letter," he said, "but all the same it may be that you have some corrections so I will read it out to you." Naturally I guessed what was up, heard him out and said that it was all in order, there was nothing to change or add. Then the letter was sent to Stalin.

* Nemirovich-Danchenko, famous theatrical impresario, founder of the Moscow Arts Theatre (1889), associate of Stanislavsky the originator of the Method school of acting. *Tr.*

† A long article in *Pravda*, 29th August, which mentioned the role of chess in cultural education and logical thinking, pointed out that Marx and Lenin had devoted time to the game and claimed "The USSR is becoming the classical land of chess." *Tr.*

In those days orders were presented at sessions of the Praesidium of the Central Executive Committee of the USSR. Kalinin was on holiday and Comrade Chervyakov was presiding. First of all he congratulated a large group of military personnel and presented the decorations to them. Then Krylenko appeared behind the Praesidium table and it was my turn. The presiding officer started to talk about me, explaining why the government had decided to mark my achievements, and then declared, "Botvinnik is awarded this order because his success at Nottingham furtherers..."; here he faltered a little, "...the cause of the Socialist revolution." High praise indeed!

Three weeks later, after a rest, I set to work on my candidate's dissertation.

At the end of September 1936 I went to the flat of my supervisor Goriev with the topic suggested by Schedrin—a study of the stability of a synchronous machine with regulation of the field voltage according to the phased angle of the armature circuit. Goriev looked at me over his spectacles, listened to me attentively, spent some time in far-away contemplation, stroked his hair, stood up (the terrier stood up too), took one of his manuscripts from a shelf and quietly said: "Here the problem is solved without regulation of the excitation. Solve your problem by the same method."

I thanked him and left.

I came again a month later. I had been working twelve hours a day. My wife and mother had been going on at me. There were many sheets of paper covered with writing, but the solution was laid out on a few pages.

"Incorrect," said Goriev, "This cannot be. The magnetic flux cannot be changed. Moreover..." Here he jotted down the terms of the expression of moments involved in the regulation, and to his surprise discovered that the remainder coincided with his solution.

He started thinking for a while with dropped jaw, then grew animated, banged his fist on the table (the terrier started barking) and said: "Now prove experimentally that the formulae reached are correct and the dissertation is ready."

He fixed a triumphant gaze on me. I thanked him and left.

During the winter Goriev had the occasional talk with me. At the end of April the experiment was finished. Theory coincided with practice on average with a tolerance of up to 7 per cent. Goriev held the dissertation in his hands, leafed through it and said, "Both short and good." In his understanding this meant a great deal.

On 28th June 1937 I defended the dissertation at a session of the Department's Council. Goriev noted that the work was the first in its field. In fact this modest work was the first of innumerable others devoted to the so-called 'strong' regulation of excitation when the inert magnetic flux of the machine is not kept constant, but is purposefully varied.

In July 1941 (the month after Hitler's invasion of the USSR. *Tr.*) I was walking past the Chemistry Department. Fortifications were already being built—stakes with barbed wire. I saw a tall fellow breathing heavily who was handling a wooden club skilfully. "Alexandr Alexandrovich," I said in horror to Goriev, "don't you have heart trouble?" "At the present time this is the most important thing", answered Goriev without stopping work.

CHAPTER 4.

The Match that was Never Played

I MISSED the USSR Championship (Tbilisi, 1937) as I was defending my thesis. Ilyin-Genevsky censured me for this, and Krylenko sent a threatening telegram ("I will raise your conduct at the Central Committee"). Then he cooled off. Earlier he had declared 'no matches' but in the summer of 1937 he announced a match between me and the championship winner. It was necessary to determine who was the strongest Soviet player. The winner of the championship was Levenfish who was nearly 50.*

Along with Romanovsky, Levenfish was the outstanding representative of the pre-Revolutionary generation of masters. He had a fine mastery of technique, a superb competitive nature, and so his practical career was longer than Romanovsky's.

The match was to be for the first to win six. Five-all was to be a draw with the champion retaining his title. I played the match badly, in my heart of hearts underestimating my opponent, but the basic reason, of course, was that all my energies were directed towards the thesis.

Before we moved to Leningrad (the first half of the match was in Moscow) I was in the lead but then Caissa, the goddess of chess, turned her head away from me. Obviously she felt (as Genevsky did) that you should

* The difficulty of establishing the exact truth in chess history may be seen by comparing this with this extract from Levenfish's *Selected Games and Reminiscences* (1967), page 160: "Immediately after the end of the championship I received a challenge from Botvinnik." *Tr.*

not cut yourself off from chess. Yet before the thirteenth game the score was 5 : 4 against the champion. The next game was adjourned in a lost position for me. I was so dissatisfied with my play in the match that I did not even get down to analysing, but rang up the arbiter Grigoriev in the morning and told him I was resigning and so the match was over.

"What's your hurry?" he said. "You simply must play it on. I have been studying it all night and found a unique endgame, pawns against a queen. Admittedly Levenfish has just one winning line but it's impossible to find it at the board. I'll dictate the analysis to you now."

"Pardon me, you are the chief arbiter, and according to the match regulations the players have no right to take advice from anybody."

"That is why I consider it my duty to help you," said Grigoriev, "I happen to know that your opponent has been using the assistance of a group of masters, whereas you are on your own."

Grigoriev was right. Even Slava Ragozin had not been with me. Before the match I warned Grigoriev that this condition would work against the more scrupulous player.

"Thank you, but I've played badly. Why be petty about it. There will be many other events. I am resigning the game." "Well I didn't really expect any other answer."

Grigoriev was a very great specialist in pawn endings and rook endings. In the 1936 competition in Paris for the composition of pawn endings he took five of the six possible prizes. He worked a great deal, as a rule at night when it was quiet. Outwardly he was similar to Zoschenko, spoke quietly and rhetorically, but when he showed his analysis there was always dead quiet—the audience was always won over by the depth of his fine concepts! He also used to analyse while on strolls. Once his life was saved only by the presence of mind of a tram-driver who managed to grab Grigoriev on his safety-net.

Grigoriev played a big part in our chess life—as early as 1925 he was in charge of the international tournament in Moscow. In 1927, at the same time as me, he gained the master title but for a long time he had a bias against me, possibly because of the incident in Odessa about the participation of Ilyin-Genevsky in the next stage of the championship.

Grigoriev was Krylenko's right-hand man. In 1935 he sent the two of

us to see the Deputy Peoples Commissar Antipov about the international tournament.

The outcome of the match was awkward for Grigoriev not only because my opponent was helped by a whole brigade of masters. At that time Soviet players needed a leader on whom they could rest their hopes of winning the world championship, yet here was a new champion—Levenfish. The situation was a muddled one and the match result only made matters worse.

Yet the question whether Botvinnik could represent Soviet chess in the world arena was no idle one. It was a troubled time on the chess Olympus. Capablanca and Alekhine had passed their zenith, there was a slightly sceptical attitude to world champion Euwe, the stock of the young generation (Flohr, Reshevsky, Fine, Keres) was rising. Alekhine won back the title from Euwe and signed a contract with Flohr to play a title match. (The match was to be subsidised by the famous Czechoslovak footwear magnate Bata.) Soon Czechoslovakia was occupied by the Nazis and the contract lost its validity. The uncertain situation was prolonged.

A double-round tournament of the eight best players in the world was scheduled for the autumn of 1938. The selection was strict, even Lasker after his lack of success in 1936 at Moscow and Nottingham did not get an invitation. Levenfish tried to insist that he represent the Soviet Union, but he was not supported and I was assigned to play in the AVRO tournament (AVRO—a popular Dutch radio company) where the participants were the world champion Alekhine, Capablanca, Euwe, Keres, Reshevsky, Fine and Flohr. Once again I asked to be sent with my wife. The Physkultura Committee told me everything was in order and we travelled to Moscow for our documents so as to go by train to the West.

Our departure was to be the following day but only one passport was issued to me, my wife was not given one.* What should I do? The Physkultura Committee was in the sphere of competence of Deputy Commis-

* Soviet external passports are issued for a specific trip and taken back after returning home, not retained as in the West. 77

sar Bulgandin. This was not so bad, we had been introduced in 1936 in Paris when I was returning from Nottingham and Bulgandin was leading a delegation of the Moscow City Council. I phoned his assistant in the State Bank and explained the position. "All right," he said, "I will report to Bulgandin."

We were in a depressed mood. We went for a walk, had supper and went to bed. In the morning it became clear that neither of us had got off to sleep. We went to the Committee on Skatertny. "Where have you been? Get your wife to fill the forms in straight away."

A weight was lifted from our shoulders, we were to go together.

It was a dangerous trip, through Fascist Germany. When we crossed the German frontier there was some type in civilian clothes checking passports and stamping them. When he saw our bright-red passports he was alarmed. It was almost as in Mayakovsky.* This type disappeared, it was a dangerous moment. The Nord-Express could not wait long. But the type flew into our compartment handed me the passports and made off without finishing the check on other passengers. The train started. At 8 p.m. we were in Berlin and on the platform was plenipotentiary Merekalov. The People's Commissariat of Foreign Affairs had asked him to check that everything was all right with us. At 7 a.m. we were in Brussels, where we were met by plenipotentiary Rubinin. The following day we were in Amsterdam.

Amsterdam is a fine city nowadays although much modernised. In those days it was a very elegant old city with a countless number of cyclists, and pedestrians were hardly to be seen. (Nowadays bicycles are not so popular, the Dutch have gone over to cars.) But in Holland there were not only cyclists, there were (just as there are now) chess players. In 1935 the school teacher Euwe had become world champion and this played a decisive role in the popularisation of chess amongst the Dutch.

Just before the tournament all the players were asked to sign a document that they fully entrusted the organisation of the tournament to the AVRO company. Yet the trust was not justified! They wore us out all

* Mayakovsky: Declamatory poet who had a poem about the consternation produced in Western frontier officials at the sight of his Soviet passport.

over the country. Before the round began we had two hours in the train instead of dinner. We played in a hungry state. The older players Capablanca and Alekhine could not stand up to the strain. When we were *en route* back to Amsterdam we were given sandwiches on the train. Once Alekhine was so famished that he pushed everybody aside and was the first to grab his victuals.

Sometimes I was lucky and Yelizarov, the driver for Exportkheleb, came for me. We had no diplomatic relations with Holland then and several employees of the wheat export organisation made up the only Soviet island in a Dutch ocean. Obviously they were my fans. Yelizarov in his Studebaker could get me back to Amsterdam an hour to an hour and a half earlier than the other players on the train.

On 7th November in the first round I lost to Fine who played superbly. Then in the third, seventh and eleventh rounds I beat Reshevsky, Alekhine and Capablanca and came close to the leaders Fine and Keres. In the twelfth I blundered the exchange away against Euwe and took third place.

I had not seen Alekhine for two years. During this time he had scored a marvellous victory over Euwe in the return match. Outwardly he had changed—he had become flabby (his lower jaw had become massive), he was somehow calmer and he had given up drinking. He found the AVRO event hard going.

My game with Alekhine was the systematic exploitation in the end-game of an advantage built up after an opening slip by the opponent. Although the game was adjourned with material equality Black's position was hopeless. I called in on Flohr in his room. A card game was in full spate.

"Hasn't he resigned yet?" asked Flohr without stopping play. "Who is 'he'?" inquired Tartakover also, as in passing.

"Well Alekhine is in a bad way," replied Flohr. "You're joking," parried Tartakover.

It transpired that Savielly Tartakover had sent a detailed account of my game to the *Telegraaf* newspaper in which he said that a draw was obvious (the pawns, after all, were level). He immediately rang the paper and they read out his report. "Everything is fine," he said, "don't change anything, but just write that it is time for Black to resign."

Tartakover had not seen the game at all so his report was 'made of india-rubber'!

Grandmaster Tartakover was born in Rostov-on-Don but was never a Russian citizen. Although he spent all his life in Austro-Hungary, France and England (during the war he fought on de Gaulle's side under the name of Lieutenant Cartier) he knew Russian in all its finer points—he had many friends amongst emigrés in Paris.

He had a passion both for chess and cards; everything he earned at chess he lost at cards. He was a talented chesswriter—Soviet school-children learnt to play in the 1920s from his book *Hypermodern Chess*.

He had a sweet good-natured character. In 1946 my wife and I with our 4-year-old daughter Olya forgot Olya's pillow in our haste in leaving the Groningen hotel. We phoned up Tartakover at the hotel from The Hague and he triumphantly brought the pillow straight to a reception at the Soviet Embassy.

The adjournment session of my game with Alekhine was set down for completion second so I stayed in the hotel. Flohr phoned, "Alekhine resigns if you have sealed g4-g5." My answer was, "Please tell Alexandr Alexandrovich that if he thinks that I have sealed a bad move then he ought not to make this suggestion."

In 1933 in a game with Levenfish I accepted a similar offer, but over the subsequent five years I had become more experienced. Such a phrasing of the question is not ethical since the opponent may have sealed another move in which case this proposal is then a form of reconnaissance and nothing else. I myself was in just such an unenviable position at Nottingham before my adjourned game with Lasker. When analysing the position it seemed to me that Lasker could get a draw if he had written down and sealed in the envelope the only strong move. During the dinner break I sought Lasker out and offered a draw provided he had made this move. He was embarrassed and said he had sealed another move, but that in his opinion a draw was inevitable. Then it was my turn to be embarrassed and I offered Lasker my pocket set since I realised that I had no right now to analyse the position further—the secrecy of the sealed move was broken. Lasker refused my set saying he trusted me and our game ended in a draw.

The adjourned session with Alekhine took place. Although I had sealed another move it didn't last long.

The game with Capa took a different course. My opponent complicated the position in a Nimzo-Indian. Whose activity would give real benefits, Black's on the Q-side or White's on the K-side? To maintain the initiative I had to sacrifice a pawn. Then I found a striking combination with the sacrifice of two pieces. The position was won. I sat there and thought about the most accurate move order. Capablanca maintained an external show of calm while walking about the stage. Euwe came up to him and asked him how he stood. Capa used his hands to express that anything was still possible, clearly reckoning on the fact that I was observing this conversation. The great practician exploited his last psychological chance and tried to suggest to his tired opponent that the position was unclear. What if some final chance error should be made from the excitement. I could feel that the tension was telling and my strength was ebbing. There came the final series of moves (Capa replied at once—I had to feel his confidence in a favourable outcome) but there were no more checks left. Black stopped the clock, the audience applauded—a rare phenomenon, normally it was only Euwe that they applauded. Eighteen years later, during an Olympiad, the chess-playing owner of a confectioner's shop exhibited a cake in his window which reproduced the exact position of this game. (See Game 4.)

I got up from my chair in an unsteady state. Everywhere was already closed but my wife persuaded the buffet lady to sell me a ham sandwich. I greedily swallowed it and came to.

The next day my wife was riding in a car with Madame Capablanca (Olga Chegodayeva—see Chapter 3. Tr.) She said (speaking Russian), "Capa was very upset when he lost to Keres. But he assessed yesterday's game differently. He said that it was a 'battle of minds'. Capa wanted to win it."

The tournament was finished. Fine and Keres were first. The organisers declared Keres the winner on the break and decided thus: the prizes are shared, but Keres is first!

AVRO needed a winner, it having been declared before the tournament that the winner would have the right of priority in a title challenge

to Alekhine. True, nothing came of this. At the opening ceremony the world champion spoke in German (Alekhine spoke German very well having studied it from childhood, his French was also good, later he studied English and wrote his last books directly in English) and with an expressive sergeant-major's coarseness read a statement in which he rebutted the claims of the organisers to influence the choice of challenger and declared that he would play with any well-known grandmaster who could guarantee the prize fund.

I took careful note of this. This was the time to decide whether to challenge the champion to a match. It was not known when I would see Alekhine again. If I were to raise the question with the government it was essential to have (1) Alekhine's agreement in principle, (2) his conditions. What should I do?

I consulted Miterjev, the deputy director of Exportkheib (the director Nesterov was on holiday in Moscow), and received full backing. Another piece of luck was that our plenipotentiary in Belgium Rubinin had come to the last round with his wife. We had a meal together in the Amstel Hotel. It was Sunday and on Sundays (for the same price) we were supposed to get high-calorie meals. Generally speaking, nowhere else have I had such tasty meals as at the Amstel Hotel.

Rubinin was 44 then, he carried himself gravely and slowly. Now he is 84, but the manner is just the same (his poor wife died in the countryside in 1942 during a fire). Rubinin is a widely educated Arts man and got to know Amsterdam with interest as he did the chess world which was new to him.

I explained the situation to him, he had the decisive say. At that moment in Amsterdam he was Soviet power for me. He gave his blessing—he had seen me at the board with Alekhine in the last round and my confidence had pleased him.

At the end of the tournament I approached Alekhine and asked him to grant me an audience. He caught on quickly, a look of joy flashed over his face. He realised that playing a match for the world championship with a Soviet player was the simplest, and possibly the only, way to reconcile himself with his native land. "Tomorrow, 4 p.m. at the Carlton Hotel", he said. (Alekhine was living separately from

the others, so as not to be in contact with Capablanca—they were enemies.)

I invited Flohr to come with me. (I needed an authoritative witness—wasn't Alekhine connected with White Russian émigrés? Care was essential.) But Alekhine had been well disposed towards me since the Nottingham tournament. The chess player in him felt my admiration for him, and this disarmed him. As soon as we had met in Amsterdam before the tournament he struck up a conversation about the new star Smyslov (Alekhine had found a mistake in an analysis published by Smyslov).

On this occasion too he was affable to both of us (after all he had previously envisaged playing a match with Flohr; Flohr of course was unhappy that now it was not he but another who was negotiating about a match but he did not reveal his feelings).

Over a cup of tea (to Flohr's surprise the champion paid the bill; Flohr had warned me that Alekhine was stingy with money) the conditions were quickly agreed: if the match were to take place in Moscow then three months before the champion was to be invited to some tournament in order to get used to Moscow conditions. Alekhine was ready to play in any country (except Holland!) and the question of venue was up to me. The prize fund was to be 10,000 dollars, not all that much since there would be saving over my share of the prize; I had no need of the money.

"And how much will you receive?" I asked. "Two-thirds—in the event of winning." This slightly complicated my task, it would have been simpler to ask for a definite figure irrespective of the outcome of the match.

"That is six thousand seven hundred dollars?" "Yes, of course." "Is that figure acceptable in the event of a different outcome for the match?" Alekhine gave a laugh and nodded.

We agreed that I should send a formal challenge to an address he gave in South America (Alekhine was intending to buy some land in Trinidad) if there was a positive decision and that if everything was agreed the announcement of the match would be made in Moscow. Before then everything was to be strictly secret.

We had a firm handshake and then parted, never to see each other again.

After the tournament there was a conference of the players—a unique event in the history of chess. There were seven of us in the room at any time (Alekhine and Capablanca took turns to be present). The discussion was about creating a “Club of the Eight Strongest” that would lay down rules for running world championship matches. Alekhine was agreeable to a prize fund of 10,000 dollars with one exception: Capablanca had to collect 18,000 dollars (10,000 in gold—these were the conditions for their 1927 match). Each member of the club had the formal right to challenge the champion. Fine and Euwe were to prepare and distribute a draft of the rules (no one suggested involving FIDE* in this).

The return journey was a long one—through Belgium, by sea to Scandinavia, by train to Stockholm and through the Gulf of Finland and Finland to Leningrad. In Stockholm I was introduced to A. M. Kollontai†—there were still impressions of her affability and energy despite her age.

I travelled to Moscow to report my trip. I phoned the assistant of Bulgani‡ I now knew and the next day I was sitting in the office of the Chairman of the Directorate of the State Bank. Bulgani did not interrupt me and listened attentively. He said, “Put down what you have told me in a letter addressed to the Chairman of the Council of People’s Commissars and I will report in person. On the envelope put my name and hand it in to the State Bank post section.” This advice was followed.

I returned to Leningrad and after the New Year I fell seriously ill—stomatitis, a temperature above 40°C. There was a ring at the door and a courier came in and said, “Take this telegram”—it was a government one. I read the text, “If you decide to challenge chessplayer Alekhine to a match we wish you complete success. The rest can be easily guaranteed. Molotov.”

* FIDE: Fédération Internationale Des Echecs, the world ruling body formed in 1924, but not very influential till after 1945. *Tr.*

† Alexandra Kollontai (1872–1952): Old Bolshevik, best known for her advocacy of ‘free love’ and as such not approved of by Lenin. Much of her later life spent as diplomat especially in Scandinavia. *Tr.*

‡ Kiylenko had been removed from office in January 1938, and then liquidated in the continuing purges. The date of his death is given as July 1938 in the third edition of the *Large Soviet Encyclopedia*. *Tr.*

It was only a few years ago, while recalling this episode, that I accidentally pronounced the text of the telegram with a Caucasian accent and realised that it is likely it was dictated by Stalin. This was his style. Particularly characteristic was the ‘we wish’ (and not ‘I wish’) and ‘can he easily guaranteed’!

It would seem the matter was settled, but in reality it all turned out to be not so easy. After my illness I went to Moscow. There were a number of reasons. I had to present myself to the new President of the Physkultur Committee, Snegov, to convince the committee that the USSR Championship should be played in Leningrad instead of Kiev (I was still under observation by doctors) and so on.

I turned up at Skatertny for a chat with V. Snegiryov who was in charge of the chess department. He asked, “What is your attitude to having a slogan proclaimed—‘catch up with Botvinnik’?”*

This was something new. Up to now I had considered that I should win the world championship for the Soviet Union. Now, it seemed, the 27-year-old grandmaster ought to play no more strongly than his comrades! Snegiryov listened to me attentively.

Then a talk with Snegov. For the first time I felt that I could not find a common language with an official on whom my chess activity depended. There were silences alternating with unfriendly remarks.

Nevertheless about two months later my letter to Alekhine was despatched by the committee and simultaneously it was announced that the Soviet championship would be in Leningrad.

Snegov’s hostility was the first manifestation of opposition to the match with Alekhine, opposition which sometimes weakened, sometimes strengthened, but persisted for seven years, right up to the time of the champion’s death.

At that time I didn’t try to clarify what it was caused by. Now I feel that the real source lay in the normal human feeling of jealousy. On the one hand, our leading masters dreamed of a Soviet player becoming world champion. On the other hand, many of them themselves hoped to

* A favourite Soviet slogan over many decades. Workers were always being urged to ‘catch up’ and ‘catch up and surpass’ (very often the USA). Such slogans were officially adopted when a formal campaign was about to be opened. *Tr.*

bring glory to Soviet chess. Some even thought that if not they, then better nobody.

Of course one may expatiate that this was a bad thing, but that is the way it was. Naturally none of them expressed his thoughts openly. No, they argued that Botvinnik was not good enough and would in all cases lose the match with Alekhine (so bringing disgrace on Soviet chess) or that Alekhine had such a political reputation that a Soviet player could not meet him at the chess board and, more than that, Soviet players (and Botvinnik most of all) should come out against Alekhine and demand he be stripped of his title, and so on. Of course these masters acted in this way only in exceptional circumstances, preferring to hide behind the backs of acquaintances of the most varied social positions.

Even Krylenko who always acted on the basis of the public interest did not realise straight away what I was destined to do for Soviet chess. In 1931 at the end of the USSR Championship everybody wanted to see the Botvinnik-Ryumin game. (I had already lost two games and was half a point behind the leader. Ryumin was undefeated.) I got the advantage in the opening, then Ryumin sacrificed a pawn to seize the initiative. Then an inaccuracy by me in time trouble, but in answer a fresh slip by Black and my opponent stopped the clock. "What time trouble?" I heard a familiar voice say. Our eyes met—Krylenko turns his back on me and leaves. He clearly favoured the Muscovite Ryumin.

Then again in 1936, behind the stage where the Moscow tournament is nearing its end. In ten minutes I was due to start my game with Ragozin. I still had some hopes of catching the leader Capablanca. People were trying to persuade me to make a draw so that Ragozin could finish up higher in the table (Slava, of course, knew nothing of this). Krylenko, in answer to my perplexed question, just shrugged his shoulders. Then I turned to Kosarev. He heard me out and then gave the command, "Play to win, Mikhail."

All this had no effect on me. I stubbornly went on towards the set aim.

In the spring of 1939 the USSR Championship began at Leningrad. The favourites including Levenfish were in had form and a newcomer came to the fore—Sasha Kotov. Only after a win against Kotov in the

last round did I win the Soviet Championship after a six-year gap. At this time when negotiations with Alekhine were in progress this was very important.

However, the main result of the tournament was not this.

From 1933 I had been working on a method of preparing for events seeking the optimal régime for a player during a tournament. It was probably in this 1939 event that the first result of this work was summed up. In the tournament book there appeared my article, "My Methods of Preparation for Competitions. Tournament Regime", in which I dealt with opening systems and endings, studying the creative and competitive sides of the opponent, the use of one's thinking time in the course of the game, how to analyse adjourned games and so on. These matters had been thoroughly investigated.

The point of the method and what distinguished it from earlier ones lay in the nature of preparation of opening systems. Opening innovations have been around for some time. Normally they are some trick or surprise. Such an innovation is good for just one game. As soon as it becomes known it loses its validity. As Mayakovsky once wrote comparing a move with a rhyme, "The most brilliant move cannot be repeated in a given situation for the next game."

I succeeded in working out a method in which the 'opening innovation' was hidden far on into the middle game. It had a positional justification of a new sort, it had no 'refutation' in the normal sense of this word. Only after having done a great deal of work, only after having tried counterideas in practical play could one find the truth and along with that a genuine refutation. So my opening systems lived for years bringing success in tournament after tournament to their inventor. Sometimes they were held in reserve for a very long time, waiting for the moment when others would finally come into them and then they could be employed and with their help one could crush insufficiently prepared opponents.

It is no accident that when this system matured (its publication could not bring direct harm to its originator since the system could only be exploited by those who have research ability and do not avoid hard work) in the period 1941–1948. I won eight first places in a row in which

I played 137 games and scored 104.5 (76.3 per cent!). Of course this was the most favourable period for chess creativity (I was 30-37 years old) but it could not all be attributed to age. Age created the essential conditions, the preparation—the sufficient ones.

So a creative method of preparation had been found which enabled me to realise my set aim—winning the world championship. Not only this, I started to play better; some grandmasters (Boleslavsky, Geller and others) also started using the method and a basic group received the necessary information about which direction they should go in working on the theory of the openings.

In the period 1940-1960 Soviet chess made a great leap forward in quality and to some extent (as I see it) this was linked with the system of preparation. In the games of the 1939 Soviet Championship, when using my prepared Grunfeld Defence, French Defence, Nimzoindian I managed to win important games and this guaranteed my victory.

In July 1939 I was living at my father-in-law's dacha at Luga. Suddenly a lanky figure appeared—Vladimir Nikolayevich Snegiryov. Snegiryov had both an ugly face and an ugly exterior and dressed not so much poorly as in a slovenly way, but he was the greatest chess enthusiast and organiser I have ever had dealings with and he seemed to have no personal life.

Behind his shoddy appearance was hidden a really wise and single-minded person. He was a good judge of people and distanced himself from chatterboxes and idlers. By all his actions and modesty he won the trust of the authorities and the respect of chess players. He established correct relations with the leadership of the *Physkultura* Committee, was the plenipotentiary of chess in sport, was trusted, supported, not hindered.

From morning till late at night he hurried about the committee hanging on firmly to his thick briefcase and 'pushing' chess matters. It is curious that he studied in the same school as the women's world champion Vera Menchik. (A Czech by nationality, Menchik never had Soviet citizenship although she was a typical Russian woman to look at. In 1926* she went

* A mistake, it seems. English and Russian reference books concur in giving the date as 1921. *Tt*.

with her mother and sister Olga—also a well-known woman player—to her father in Prague and then to her grandmother in England. In London* Vera took chess lessons from the Hungarian grandmaster Mroczky and this had a decisive influence on her chess development. In January 1935 I was a guest at her grandmother's in Hastings and in 1936 my wife and I were guests of the Menchiks in London. The family lived not far from the Soviet Embassy on Queen's Road in a house which shook from the underground trains passing below—the cost for flats here was less. Vera and Olga lived on private lessons in chess and cards. In 1944 they all died from a German bomb.)

Alekhine had sent his reply and Snegiryov had come to see me about it.

The world champion, in accordance with our agreement, had accepted the challenge and all the conditions apart from one. He no longer was agreeable to playing the whole match in Moscow. He demanded that the second half should be played in London.

The champion's conduct did not please me. It was a breach of the gentleman's agreement and made for extra difficulties—it would be necessary to negotiate with the British Chess Federation. This latter consideration did not worry me much, since the English would go along with this if the prize fund was guaranteed, but it did mean we would have to make a fresh approach to our government.

I wrote Alekhine a polite but firm letter insisting our agreement in Amsterdam be confirmed and that the whole match be in Moscow. Snegiryov went straight to Leningrad so that the next morning he could report to the committee leadership in Moscow on my proposals.

The Second World War started on 1st September and the first stage of negotiations for the match was finished at this point. The negotiations were continued six years later, but in essence there was no break—the question of the forthcoming match stood out prominently in the Soviet chess life of those years.

In the summer of 1939 the Council of People's Commissars† instituted a grant of 1000 roubles for me (now about 100 roubles)—an exceptional act. Presumably this was done on the initiative of Snegiryov. There are

* Actually Hastings. *Tt*.

† The supreme state body, replaced in 1946 by the Council of Ministers. *Tt*.

chess players everywhere (even in the Council) and later I got to know that the representatives unanimously voted in favour.

I decided to play some matches, since I had not played too confidently against Flohr and Levenfish. In the spring of 1940 Slava Ragozin and I agreed to play a training match. We played under ideal conditions, a good schedule, fresh air and quiet. I went through this event in easy fashion though I was twice a hairsbreadth from defeat.

In the autumn the Soviet Championship began.

This was a very hard tournament with a lot of players and few rest days. The large hall of the Conservatoire has excellent acoustics. The spectators behaved in a free and easy style, made a noise, applauded and the acoustics only made matters worse. It is related that after one of Keres's wins Sergei Prokofiev applauded in stormy fashion. His neighbours in the box told him off. "I have the right to express my feelings", declared the composer. But would my friend Sergei Sergeyevich be happy if he were playing in a trio and if after the violin part the audience clapped and drowned his play on the piano? Yet the position of the chessplayer is even worse than that. A pianist can afford to play false notes when drowned out by the noise of applause—the chess player does not enjoy this right. There were many newcomers playing in the championship—Keres (Estonia had become a Soviet Republic by this time), Smyslov, Boleslavsky.

Obviously the main interest was in the participation of Keres. Who in the changed circumstances should represent the USSR in the fight for the world championship against Alekhine? The tournament failed to give an answer.

After 9 rounds I was in the lead but then my nerves started to play up, the surroundings were not very propitious for creative concentration—in such conditions I felt helpless. Bondarevsky and Lilienthal* shared first place, Smyslov was third, Keres fourth, and I shared fifth-sixth place with Boleslavsky.

A match was announced between the two winners for the title of Soviet Champion. Until December I could not bring myself to touch the chess

* Andre Lilienthal was born (1911) of Hungarian parentage in Moscow, represented Hungary for a decade or so, but became a Soviet citizen in 1939. *Tr.*

pieces, so unpleasant was the aftertaste from the tournament, from the unhealthy din (just as if you were at a football stadium), from the scornful attitude to the creative side of chess.

In December I started examining one variation of the Nimzo-Indian and I felt that it was coming back to me. At the same time I sent a letter to Snegiriov where I was ironic about the fact that the champion was to be the winner of the Bondarevsky-Lilienthal match (both were fine players but did not have any great achievements to their name) while Keres and Botvinnik already had such great achievements in international tournaments.

Snegiriov himself realised that this match had no significance for the rivalry with Alekhine. He understood my hint and set to work—as always quietly and energetically.

I do not know how he managed to convince the authorities, he never revealed this, but about two months later came an announcement about the setting up of the title of 'Absolute' Champion of the USSR and the running of a match-tournament of the six winners in the championship in four rounds.*

The sense which Snegiriov gave to the concept 'Absolute' was clear. It was the Absolute Champion of the USSR who would play the match with Alekhine.

I prepared in accordance with my published system with several additions. Since I had suffered in the last championship from the smoke and noise I played training games with Ragozin with the radio on. After the game I did not open the small window and slept in the room which had been filled with smoke. We stayed in a rest-home of the Leningrad City Party Committee at Pushkin opposite the high school (formerly the home of the police commandant of Tsarkoye Selo†). During the day we went skiing and in the evenings we played. I prepared thoroughly—physically, technically and morally. My taste for the game reappeared.

So, the match tournament, whose decisive encounter came in round

* It is significant that this is the only time the title of Absolute Champion has been played for. *Tr.*

† Tsarkoye Selo, later Pushkin, now reverted to its former name, was the township in whose high school the national poet was educated. *Tr.*

3 of the first leg. Keres as White adopted a risky line in the Nimzo-Indian. This variation had already been played in a published game and had been incorrectly assessed. Keres was relying on this assessment. As I have already noted I started my preparation with this variation and had analysed the variation very deeply. The game ended with a swift mating attack.

After the game I went behind the stage (we played the first half in Leningrad in the Tauride Palace) to relax. Snejgiryov rushed forward and pressing his hands together (obviously to restrain himself) ran round and kept saying, "Em, Em (that was the way he addressed me when he was excited by something) you yourself don't know what you have just done." It seems he had forecast my success when insisting on the event and was now triumphant.

Then we went to Moscow and played in the Hall of Columns. Both here and at Leningrad Snejgiryov had organised the tournament superbly. He secured silence in Moscow by the simple expedient of having a militiaman patrol the central gangway. On one occasion an undisciplined spectator was removed and fined. In Leningrad where all the seats in the hall were equipped with individual earphones the spectators were kept entertained all the time by Levenfish commenting on the games and so there was no talking in the hall.

I won all the matches including those against my difficult opponents Bondarevsky and Lilienthal (to whom I lost in the championship). Keres was second 2½ points behind me, Smyslov third. It became clear who should meet Alekhine.

Two months later Fascist Germany attacked us and chess receded far into the background.

The war. It was a terrible time. Relatives and friends were dying at the front line, illness and lack of food were widespread. Factories, workers with their families, the wounded were transferred to the East, troops and armaments to the West. The Soviet people reorganised on to a war footing. Everybody suffered, chess players suffered too. Of the pre-revolutionary generation perished Ilyin-Genevsky, I. Rabinovich, Troitsky and L. Kubbel; of the younger generation Ryamin, Rauzer, Belavenets, Mazel, Stolberg, Zek.

All the staff of the chess department of the Physkultura Committee, Snejgiryov, Yeltsov and Kuryskhin, died in the first few days of the war. Ragozin, Tolush, Goldberg, Dubinin were at the front. Private Dubinin, who was a big tall man, carried chess books in his kitbag throughout the war.

I was called for a medical and given a 'white chi' (certificate of exemption) due to my weak vision. I asked to be sent to the front as a volunteer but was refused. What should I do? It was vacation time at the Institute, moreover it seemed somehow strange to be engaged in civilian activities. I helped a comrade to construct an electric air-filter for bomb shelters. My wife brought home the news that the Kirov Opera and Ballet Theatre was being evacuated to Molotov (Perm). "Let's go together," she said, "you can work as an engineer in the defence industry."

The Secretary of the Institute's Party Committee could not decide himself. I went to the Regional Party Committee. The Secretary made his mind up quickly, "Comrade Botvinnik, there will come a time when you will once again be useful to the Soviet people as a chessplayer. Leave."

I handed my car over to the army. It was in perfect order although it had done many miles; more than one car enthusiast had trained in it.

Before our departure we had to decide yet another problem. Just before the Revolution Father had bought some gold ornaments. When he left us he left the gold with Mother (more than a kilogramme). It had lain there for 21 years. I asked Mother "Hasn't the time come to hand it over to the Defence Fund?" She signed a form to that effect at once. Yet there was no time to hand it over and I gave the form to my brother. He was staying in Leningrad and was assigned to a destruction battalion. When we were in Molotov I get a letter from my brother (I still have this last letter) confirming that Mother's wish had been carried out.

At the station I was seen off by my brother and my old friend Weinstein. The train was made up of goods waggons. "Let's travel together," I said to Weinstein, "After all you aren't being called up for the army." "No, I'm staying," said Weinstein. He only survived till January 1942. Finally we were on our way. This was on 19th August 1941. Two days later the railway line was cut by the Germans.

Just by Mga we could hear a distant explosion and we were stationary

for a long time. It was the first bombing raid on Mga. Several days later we arrived in Molotov. The theatre artists were housed in the Teachers Training Institute Hall of Residence. My wife was given a separate room for our family of five people.

I went to look for work. First to the metal-working factory. I was received by the Director Bykhovsky (whose son is now trainer of the Soviet junior chess team in which Romanishin, Vaganyan, Belyavsky, Dolmatov and Yusupov have come under his charge recently). He was prepared to engage me but I refused since it was a long way to the factory and a one-direction-only train went to it. How would I get home in winter?

Close by I found the North-west Regional Network of the Ural Energy Organisation. My Candidate's degree frightened the director who said, "We'll take you on as an engineer on the lowest rate of pay if you don't take part in any science." I agreed and became an employee in the high-voltage laboratory!

Gradually I became friendly with the people of Perm. I became head of the laboratory, then head of the high-voltage isolation service.

I became close friends with the foreman Mikhail Fyodorovich Demenyev. He was a thin lanky person of enormous physical strength (he had lost the use of one eye in his work). He used to complain that he had become weak; earlier he had been able to transfer two high-voltage plugs, whereas now he could manage only one. He was a cunning person, fair, uneducated but he knew voltage-isolation (testing and repair) very well. On top of that he was a unique winder of electric motors, an activity he engaged in on the quiet—people used to come and pay their respects to him from all over the oblast administrative area. He could cope with anything. When I transferred to Moscow in the winter of 1944 I was walking along one day with my daughter in First Meshchanskaya Street. A broken-down trolley bus was standing by the kerb. "What's wrong with it?" asked little Olya. "Well it's broken down." Never mind, "said Olya, Uncle Demenyev will repair it!"

We had a young electric fitter working with us, Sokrat Gudovschikov. He was short, massive shouldered and strong, with high cheek-bones and a will of his own. His smile was slightly twisted, his chin firm-set like one

of the English heroes of Jules Verne. He liked to stagger people with surprises. For example, once we were travelling with a Schering bridge to check isolation, and Sokrat disappeared. We swore at his lack of discipline, but when we arrived he was sitting there in a careless pose waiting for us. It is inexplicable how he got there in time. Probably he hitched a lift with some passing lorry. Soon Sokrat was called up for the army to an electrical training base in Siberia. He kept on asking to be sent to the front, but they wouldn't let him go—he was superb at his job. Then he indulged in such hooliganism that he was sent to a punishment battalion.

About ten years later after the war I met a chess player who had fought on the Karelian front. "We had a soldier with us who said he had worked with you in the Urals, only I can't remember his name," he said and then described him.

There was no doubt that this was Sokrat. He did not get back from a reconnaissance mission.

The Schering bridge worked badly. The readings had to be taken in the absence of current in the diagonal of the bridge by means of a highly sensitive galvanometer. The circuit was made up of separate elements, and everything was open. The interference (noise) at the sub-stations was strong, and it was impossible to work. I insisted that we build a covering leather screen (in the form of a piano) and carry out stationary fitting. They checked the isolation at all the sub-stations. At first Demenyev was unhappy with it, the bridge had become heavy, but in unison with Sokrat he coped with ease.

Despite the prohibition I still had to deal with scientific work. I was summoned by the Chief Engineer A. M. Levkevich. "Is snow an isolator or a conductor?" "I think it is an isolator, but we must check it."

I took a layer of snow and fed in the voltage. At first the current was equal to nil. Then from the corona (the sparking) there started a localised heating, the snow started melting, the conducting channel started lengthening, and then a breakdown.

I went to the head office. "Alexei Matveyevich, after a period of time a breakdown is the most likely outcome." The Chief Engineer laughed. It turned out that in the north of the oblast a hurricane had knocked down

the electrical supply supports. The wires had lain in the snow, and this had not been spotted for days on end. The accident was noted when the wind dropped.

In the winter of 1942 I went to Sverdlovsk on business. A miracle: there was a master tournament being played here (under the direction of Rokhlin). There were few spectators, yet all the tickets had been sold and you couldn't get in. It turned out that for the ticket you also got a bread roll in the buffet. The tickets had been taken by various people who were not chess players. I had a talk with Rokhlin, shook hands with Ragozin. Lieutenant Slava Ragozin was the winner—he had just been transferred from blockaded Leningrad to the Urals.

Rokhlin cracked a joke and I burst out laughing. "Well, everything's all right," he said, "you laugh like you used to do. The war hasn't been able to change that."

In April 1942 my wife was due to give birth soon. I was called away to a crisis at the flour mill where a new electric motor failed to work. After it had been put right I returned home late. "Eat quickly", said my wife, interrupting my story about the mill; it was time to go to the maternity home.

Early the next morning little Olya came into the world. "Ooh, what a dark one", said Ulanova when I went for a stroll with the sleeping baby. (Galina Sergeevna was also living in the theatre's hall of residence.)

It was a hard time. There was a trade in ration coupons. It was mainly the bread which saved us, with three people in the family at work. We exchanged part of the bread ration for potatoes at the market. When the baby grew the position became worse. I had to sell my Underwood typewriter. Employees of the Soviet embassy in London had got it for me out of the prize money at Nottingham for the best game there (the jury had reached its verdict after I had left England.) I had typed out my candidate's thesis on it, but now little Olya 'ate it up'.

During the war with Nazi Germany the main task for Soviet players was not only to maintain what had been achieved—development of the game among the masses and a high level of strength among the best masters—but also to prepare to win the world championship after the war.

This was the case not only in chess but in other cultural fields. Obviously this is possible only where chess enjoys the support of the state.

It stands to reason that for the first eighteen months after being drawn into the war when the country was in a difficult and dangerous position these efforts to support chess were minimal. However, after the victory at Stalingrad no one doubted our ultimate victory. Heroic efforts both at the front line and in the rear, in the military field and the economic, brought their results.

So work there was, but I still had to prepare for the match with Alekhine. I decided to write notes to all the games of the Absolute Championship so as not to lose my mastery in analysis. I worked in the evening using every spare minute but there were few of these.

Once I was sitting at a meeting; it was boring and work was waiting for me at home. I wrote a note to the chairman, "Aleksy Matveyevich, I don't feel well." His answer came back, "I want to go home too..."

I spent a year and a half writing the book. I have long suspected that it is the best I have done in the field of chess analysis. Several years ago Matanović told me that he was studying the work at that time with amazement (Grandmaster Matanović publishes *Chess Informator* in Belgrade—the reference book of every qualified player nowadays).

The idea came to me of forming a 'committee' for preparing for the match with Alekhine. I decided to approach Ragozin, Rokhlin, and Goldberg. There came a knock at my door and in came... Grisha Goldberg, a captain in the navy (his wife worked as a military doctor in a local hospital and he had come to see her). As long ago as 1932 we had played together in the Leningrad championship. He was 190 centimetres tall (i.e. 6 ft 3 in. 7r.), had a decisive character and combined the strength of a master with the talent of an organiser. In the 1930s he had played a notable role in the chess life of Leningrad. He organised the second half of the match with Flohr—and did it very well.

"I agree," he said, "but what can we do now for the match? It's wartime."

As soon as the war began chess life had practically come to a full stop, yet the Moscow Championship, a tournament in Kuibyshev and the tournament in Sverdlovsk already mentioned had been played. I had no

time to play and was not in the right frame of mind for it. However, I had to look ahead and so I kept busy with analysis. In January 1943 I was sent to do timber cutting. I realised that at this difficult time it was essential, but one day in the forest knocked me up for a long time and I was in no state to work on the book. What should I do? After all I could be sent out at any time, firewood was needed for fuel. But what about the chess? Should I give up working on the book? Then what would happen when the war ended? I thought it over and sent a letter to Molotov—he was the one from whom I had got the telegram four years ago with permission to play the match with Alekhine.

A couple of weeks later I was called to the government telephone in the office of the man in charge of the energy system—someone wanted to speak to me from Moscow.

"Is it you who wrote to Comrade Molotov?" asked Smirnov, deputy director of the secretariat. He told me Molotov's instructions, "Comrade Zhimerin, it is absolutely necessary to maintain Comrade Botvinnik's readiness to play chess and ensure the necessary time for further improvement." (Zhimerin was People's Commissar of Electrical Power Stations at the time.) True, when the Commissar's order came allotting me three days a week for chess the director decided that Sunday was included in the three, but I didn't argue; it was fine as it was!

Then came a message from the Physkultura Committee that in the spring I was to go to Sverdlovsk—there would be a master tournament of eight players in two rounds. The Area Executive Committee sent me for two weeks to their State Farm to prepare for the event. I was called for by a 'coach driver' on a sledge. The food at the farm was superb. Roast pork and potatoes twice a day and a litre of milk fresh from the cow as well as bread! I ate, walked, slept and worked with a fierce energy!

There were no weak players in the event (Smyslov, Boleslavsky, Ragozin and so on). Against each player I scored $1\frac{1}{2}$ points and easily took first place. I had not played chess for two years but I seemed still to be master of my preparation method and had not weakened as a practical player.

In the summer the Area Executive Committee gave me permission to take my daughter to a children's camp where there were children living who had been evacuated from Moscow. The camp was on the banks of

the Kama. Olya stayed there with her nanny. They were housed in a separate cabin in a clearing in the forest.

Six weeks later I called for them and invited V. A. Kaverin* to come with me. He was writing *The Two Captains* at the time, wanted to concentrate and so agreed with pleasure. The journey was not an easy one since there was no landing stage at the camp and we had to summon a buoy-keeper with a boat from our ship. It was already night but I recognised the outlines of the bank and asked the captain to call the boatman. We stopped and sounded the hooter over the whole area—no answer. Finally somewhere far away came the splash of oars (the Kama is very wide). We wait until the boat is close. "Uncle Yegor, † is it you?" No answer. "Uncle Yego-o-or." "Of course it's me," came a querulous voice, "who else would it be?"

We stayed there three days—a marvellous area, clean. Kaverin thought about his captains lying on his back in the forest. "Tell me, can one do so-and-so?" he would ask my advice. I could tell him nothing then. How much easier it is to write reminiscences; all you have to do is to think what should be published, what not!

I went with Olya to Uncle Yegor to agree about our departure—we had to tie up the rowing boat to a passing ship. Little Olya could walk well holding onto a finger, but was still frightened to go by herself. I left her in a small clearing and called in on the buoy-keeper. Uncle Yegor refused outright to sit on the bank and wait for the boat, he was too busy. Disappointed, I hurried back to Olya and saw that she was walking on her own. There were pretty flowers growing in the clearing and she had to pick a bouquet.

With Kaverin we went to another buoy-keeper Uncle Ilyo. Sturdy, lazy, he had had various appearances in court (his buoys were not in order and the boats grounded on the sandbanks). Kaverin watched how he scratched his paunch and said quietly in delight, "Yes, a genuine peasant of the time of Ivan the Terrible."

* Kaverin Benjamin (1902–), member of the literary group the Serapion Brothers in the 1920s. The book mentioned here, *The Two Captains*, was so popular that it went through 42 editions in 25 years! 77.

† Uncle: a polite way for children (and others) to refer to grown-ups. 77.

"Will you feed me?" was all that Ilyo asked. We sat there on the bank for two days waiting for the boat and listening to his tall tales. Only God knows how he managed with the buoys, but he rowed up to the boat in dashing fashion.

In the summer of 1943 Zhimerin called me to Moscow and suggested I transfer to the capital. He turned out to be a fan of mine and our friendship dates from this time.

At that time I was already thinking about a match with the USA champion Reshevsky. There was a turning-point in the war (when I was in Zhimerin's office for the first time he was phoned and told about the successful battle in the Kursk bulge; what tension and joy we received this news with). I had to ensure an undoubted right to the match with the champion. Alekhine was then playing in tournaments in Occupied Europe. What if he were to try and shirk the match with me?

After the match-tournament of 1941 Keres had no particular rights, poor Capa was no longer with us (on a winter morning in 1942 a workman stopped me and said sadly, "Have you heard the radio? Capablanca has died." The Cuban's popularity was very great.) Fine was not the USA champion so that meant that all that was left was to beat Reshevsky in a match.

I decided to use my presence in Moscow to sound out the ground. I phoned B. Podtserob, head of the secretariat of the People's Commissar for Foreign Affairs. For about two months we had been fellow students at Leningrad University, he was a friend of Slava Ragozin, was a reasonable player himself, had first-category status. He played a great deal of postal chess and later on was a participant in a semi-final of the Soviet postal championship. He had a good knowledge of French and gained promotion in the diplomatic service.

"It's a complicated business", he told me. "Try to approach Litvinov, he is in Moscow at the moment" (Litvinov was then ambassador in Washington).

Litvinov received me in his office. He greeted me in simple fashion as if I were an old acquaintance. I was amazed. I had heard so much about his dangerous underground work before the Revolution, about his acumen and energy, of his encyclopedic knowledge, his hard (not to say

stubborn) character. Yet this was a person of medium height, slightly run to fat, with soft facial features. He spoke in a sing-song voice. Truly this was a gap between form and content.

"I, as ambassador, am for it, of course", he said, and smiled. "I shall always support your contest with Reshevsky, but I myself cannot decide matters."

It became clear: a hopeless undertaking. In the autumn of 1943 I asked to be invited to play in the Moscow Championship for training. It was with some difficulty, but I got an invitation to play *hors concours*. The event lasted all December. I lost to Smyslov but took first place. Unfortunately I did not write out the game scores and the originals were lost by the organisers—so several interesting games are lost for good.

During the tournament I was invited to dinner with B. S. Weinstein (a namesake of my old friend who was no longer alive), the chairman of the all-Union Chess Section. I also met there Zubaryev who had replaced Snegiryov in the post of director of the Chess Section of the Physkultura Committee.

I was on my guard, guessing that the match with Alekhine would come up.

The dinner was superb by the standard of the time—cutlets and wine. I ate the cutlets and refused the wine. Then it started... Alekhine was a political enemy and it was out of the question to play him; he should be stripped of his title and the Soviet Champion must carry out his civic duty and be the first to demand his exclusion from chess life. Do I have to go through all these demagogic arguments? Weinstein spoke, Zubaryev nodded his agreement. I expressed my point of view calmly, sharply and firmly and then took my leave. (It was clear that with such a chairman I wouldn't get the match with Alekhine.)

One could approach the question of playing Alekhine from two points of view, but all this had already been thrashed out in the 1920s, when it was accepted that while condemning Alekhine as a person we gave him his due as a chessplayer. Refusing to have anything to do with the chess-player Alekhine could not but cause harm to Soviet chess. That is why I played against him at Nottingham and in the AVRO event. The decision of the government in 1939 about organising an Alekhine-Botvinnik match finally put an end to all these polemics.

Of course as a person Alekhine was fairly vulnerable, but as a player?

In his youth he preferred a combinational struggle, headlong attacks, outward effects but then Capablanca's creativity had a considerable effect on him. Capablanca's calm style, the harmonic combination of very exact positional understanding with a calculation of variations imparted a particular elegance to the Cuban's games. With Capa all the pieces played together, they were firmly linked. Capablanca was equally strong in complex and simple positions.

Alekhine's understanding of complex positions was on a very high level but what about simple ones? Here Alekhine had a schooling from his older friend—they were inseparable in the period of the second decade of the century when Capablanca represented Cuba in Petersburg. The struggle for the world championship made them enemies.

Alekhine knew how to control himself. Although he gave himself over to human faults (and this undoubtedly undermined his health) he did everything in the interests of chess when drinking, smoking or card-playing got in the way.

That was the way he studied chess: when he became conscious of his failings he found ways to perfect himself with remarkable perspicacity. As a result of many years of immense effort Alekhine appeared before the world as a chess titan with a mastery of the most varied aspects of his beloved art and of the competitive struggle. No little role in his growth was played by the analytical works he published in those years.

I saw Alekhine in 1936-1938 when he had already passed his peak of success and I must admit that it was with difficulty that I imagined him as a young man.

Yet in May 1973 I did see the young Alekhine. During a trip round the Federal Republic of Germany I had to go from Kell to Schomberg and the route was via Tribberg. The interned Russian players, Bogolyubow, Romanowsky and so on, were allowed to reside in this small town in 1914 by the German authorities. First of all they lived in the Wehrle Hotel (where we had a meal) and then in private homes. In 1920 Bogolyubow married a schoolteacher's daughter. Frau Freda Bogolyubow

(who was then in her eighties) lived in a house where the facade had a notice "The Bogolyubow House".

The local players showed me a unique photo by an amateur. It was of small size but Bogolyubow and Alekhine came out well on it. I had never seen them like this. Bogolyubow was slim (this was about 1922). He was smiling and looking respectfully at his colleague. Alekhine was gesticulating with his right hand and, with raised eyebrows and a sly look on his face, was relating something.

I was sorry to part with the photo; they promised to send me a copy but it had still not come three years later. There was so much expressiveness, humour, spiritual strength and calm certainty in his appearance that I understood how he could withstand the severity of the struggle with the great Cuban and take the world championship.

In the 1940s Alekhine was already not so great as a player as before and this was the main chance for his potential rival in a match.

My position gradually gained the support of the other members of the all-Union section—Weinstein did not have any authority. Just in case, I went to the Party Central Committee, to the Department of Health Service cadres (this was the department to which the Physkultura Committee was subordinate). I saw the director B. D. Petrov, a small person, bald with spectacles. Doctor Petrov turned out to be a resolute and intelligent person.

"Don't despair," he said, "act according to Mayakovsky",* and told me how Mayakovsky was refused payment of his fee in the accounts office of Gosizdat.† He came several days later with a stick and asked "Are you paying?"—"No". Then he smashed a window with his stick (it was in wintertime) and, going out said, "Take it out of the fee." He came with his stick a few days later and was met by "Vladimir Vladimirovich, please accept your fee...." We laughed and I added this advice to my armoury.

Finally there was a conference of the all-Union section and the ques-

* Mayakovsky (1893-1930), the declamatory poet and poster artist, who led a Bohemian existence and shot himself in 1930, but was then acclaimed by Stalin as a great Soviet poet. 77.

† Gosizdat—State Publishing House. 77.

tion was raised of retiring Weinstein. He defended himself desperately, but Vasya Smyslov took the opportunity to speak next and began, "The former Chairman of the section, Comrade Weinstein..." Whereupon Weinstein did not let him go on, but clasped his hands together and then capitulated.

I transferred to Moscow where the People's Commissar assigned me a separate flat. My daughter went into one room and marvelled how spacious it was (there was no furniture there), then she went into the other and exclaimed, "What, another room!" (In Molotov there was one room for six of us.)

In the summer I went to Leningrad and brought back my furniture which by a miracle was still intact (during the German blockade furniture had been used for fuel). The bedroom furniture was old, of redwood of the sort lovingly collected by a former Tsarist colonel. He had sold me the furniture in 1935—it had taken all my prize money from the international tournament.

In spring 1944 the first Soviet Championship since the beginning of the war was played. Smyslov took the lead, but I was fortunate enough to win a crucial game against him after which it was plain sailing. The prizes had been announced as money ones. I came to the closing ceremony and saw an old table clock under a glass case on the podium. Asking what it was I was told it was first prize.

I never went chasing after money but once a prize had been announced the programme had to be adhered to. This lack of respect for chess and its traditions grated upon me. The point is that whereas in sport money prizes are not given they are a long-standing tradition in chess. In sport there is a clear divide between professionals and amateurs, but this is not the case in chess and never has been. True, in the 1920s FIDE tried to set up such a dividing line and even ran three amateur world championships but this idea petered out as the participants were weak masters and nobody was interested in these 'world champions'.

Chess players want good games and it is immaterial to the ordinary fan who provides them—professionals or amateurs! That is why I wrote as early as 1939 in defence of the chess professional, "We have many professional violinists yet chess is no whit inferior to the violin."

The programme is the constitution of an event. What is written there must be carried out to the letter. Would anybody at a piano competition ever get the idea of changing the regulations?

I remembered Petrov's story about Mayakovsky and said to the chief controller, "If you present it I shall refuse to accept it in front of everybody." So nobody could understand why the clock stayed where it was, but I did receive my money prize six months later after I returned home from hospital after an operation (appendicitis).

A year later in the spring of 1945 came another USSR championship. My mood was excellent, the Soviet people were exultant with the winning of the war. The Soviet state had withstood every trial. I played with success (16 out of 18)—Ragozin and I had prepared very well for this event. Boleslavsky was second and became a grandmaster.

The Soviet School of Chess had not only not weakened during the war but had probably become stronger from the creative point of view. Its research characteristics guaranteed the swift improvement of young talents; as already noted this was possible because of the support of the state.

Just before the championship a certain Pirogov phoned my home and spoke to my wife. "I worked as an accountant in the committee before the war, now I have returned from the front and I cannot find out why your husband is not receiving his grant." My wife explained that the war had broken out and in the autumn of 1941 the payment ceased. "Unlawful," commented the accountant, "the decision of the Council of Peoples' Commissars had not been rescinded." The grant was restored at once.

N. N. Romanov came to work at the Committee (Snegov was replaced) and a good time for sport began.

Exact, thoughtful and purposeful the Chairman won both authority and love—Romanov's name is associated with large scale success by Soviet sport.

At the end of the summer the USSR-USA radio match was organised. It caused great interest. This examination of the Soviet Chess School proceeded with the invisible presence of Krylenko who had prepared our triumph along with the players and organisers of the pre-war years.

The result of the match, 15½-4½, amazed everybody. Smyslov won both games against Reshevsky—an important event. Unofficially we had passed on to us Stalin's words, "Well done, boys."

We were invited to a reception with Alexandrov, head of Agitprop in the Party Central Committee. He spoke cordially but without any enthusiasm. The question was posed, "When is Botvinnik going to play a match with Alekhine?"

Alexandrov didn't understand the question. Then Vitya Chekhover* repeated the question with a marked sharpness. The reply was vague, phrases open to more than one interpretation.

But it was impossible to halt the inevitable. A change for the better had come about in the top echelons; five first prizes in a row had convinced the sceptics.

About two weeks later Ragozin with a laugh showed me a copy of a letter to Stalin (about the Alekhine match) signed by almost all leading Soviet masters. Only two had refused to sign, their motive being that Botvinnik was not strong enough to play Alekhine. By a strange coincidence both were close friends of Weinstein.

So the opposition had foundered at this stage, but they did not give up.

Had Alekhine collaborated with the Nazis? This had not been investigated. A group of players (headed by Euwe) had made such a serious accusation against him and on this basis Alekhine's invitation to the Hastings tournament had been annulled. The point was that during the war an article by Alekhine (on chess, but of an anti-Semitic nature) had appeared in the Nazi paper *Pariser Zeitung*. After the war Alekhine declared that the anti-Semitic phrases had been added to the article without his knowledge.

Nevertheless before Hastings Alekhine's situation was difficult. He anticipated that he would not be able to avoid the accusations. So the world champion came to the obvious decision—to offer a match with the Soviet champion. This would shield him from all accusations. Just as

* Chekhover, born 1906, became a master in 1932 and a famous study composer somewhat later. As a resident of Leningrad he was particularly close to Botvinnik. 77.

in 1938 this match was the simplest way to reconcile himself with Mother Russia.

In the autumn of 1945 the British magazine *Chess* published his sensational article "Two World Wars have Ruined Me". The main point of the article consisted in Alekhine's account of our negotiations in 1938-1939 and he declared that he was ready to play a match with Botvinnik on the conditions agreed earlier.

This eased the problem. Now there was not only the declaration of Soviet masters about the need to organise the match, but also the agreement of the champion. True it was rather annoying that Alekhine had not fulfilled the agreement and had revealed our secret negotiations, but there was no other way out for him.

Soon there came a positive decision by the government and one could act. The situation was a delicate one. First of all it was out of the question to invite Alekhine to Moscow, as this was linked with the preliminary investigation of the accusations, and secondly it was undesirable to enter into direct negotiations with him. I suggested that the whole match be played in England and at first the negotiations went through an intermediary, Mr du Mont, editor of the *British Chess Magazine* (from material published in the magazine one could take it that du Mont and Alekhine were corresponding with each other) and with the co-operation of the well-known chess master George Thomas. The suggestion was accepted and negotiations began.

These negotiations went along haltingly; the opposition opened fire again. I was summoned by the Chairman of the Physkultura Committee and found his deputy Andrianov sitting in the office. He had worked in the committee for a long time and we knew each other well. He was a strong official, did not avoid taking decisions and his businesslike qualities were on a high level. However, I guessed that he had no particular sympathies for me.

Andrianov had just returned from Paris where he attended the cross-country tour organised by the paper *L'Humanité*. He told me that I mustn't play the match with Alekhine, that was the opinion of the French Communists. "What is that source of this information?" "It is from Znosko-Borovsky (a prerevolutionary master and emigré), his son is a

Communist." I tried to convince Andrianov that the basic task was to ensure that a Soviet citizen won the world championship. There was no other solution than to beat Alekhine. The chess world would not recognise a champion who appeared in any other way. Quite the contrary, if we turned against Alekhine there would inevitably be accusations that Soviet players were frightened to play him. Andrianov was adamant. Romanov kept quiet. "Well, Nikolai Nikolayevich, does that mean that the government's decision about the organisation of the match with Alekhine is rescinded?"

Romanov joined the conversation, "No, no, everything is in order", and we parted dissatisfied with each other.

But it didn't end there. Once again I was summoned by Romanov. I arrived, sat in his reception office and waited. Romanov came out of his office, affectionately took me by the hand (he always had a paternal attitude to me as he had to all sportsmen despite being younger than me), led me into another room and then disappeared.

There were two men sitting in this office. One was older and more solidly built with a strong willful face. The other was younger with a lively sympathetic face. He positioned himself behind his comrade (the first one could not see him) and occasionally gave a pleasant smile.

They turned out to be chess players and started talking about the latest events. Then as if incidentally came the question, "Have you ever had occasion to meet White Russian emigrés while abroad?" "How could I not, I've played Alekhine and Bogolyubow in tournaments." The young one laughed; he had, it would seem, warned in advance that such questions were superfluous.

"Has it ever happened that you have had people sent to make contact with you?"

I told them how in 1938 in Amsterdam when we were living in the Amstel Hotel the porter rang me and said some gentleman was waiting for me downstairs. The visitor had a seedy appearance, plus-fours, an old jacket whose owner had clearly once been fatter, antediluvian sideboards. He spoke Russian and ordered tea. He started up a conversation about the Revolution, said that he had been acquainted with Lenin and had tried to dissuade Lenin from any uprising. "Why?" "Well, you see,"

said the visitor, "it's all turned out so badly." "What are you on about," was my reply, "certainly not bad."

Should I allow myself to be distracted during a tournament by trifles? That is not my style. I gave the porter a 2½ guilder piece and warned him not to admit such gentlemen in future. The porter smiled and gave an understanding nod of the head. My collocutors also started smiling.

"Have you ever been approached by a foreign diplomat in Moscow?" Yes, a secretary from the Cuban Embassy had phoned and said he was supposed to hand me a book dedicated to the memory of Capablanca. "What was your reply?" "I told him to hand the book to the Physkultura Committee."

The conversation moved on to other topics and we parted in cordial fashion.

Then I started thinking. What had this spectacle been arranged for? Probably for all their politeness my collocutors were carrying out somebody's mission, although they themselves realised it was all pointless. Somebody was trying to make me realise that if I insisted on a match with such a doubtful personality as Alekhine then I myself might come 'under suspicion'.

What could they do, though? It was not possible to rescind the government decision, so the idea came up of putting pressure on Botvinnik and then he might give up the idea himself.

A letter arrived from England, from Derbyshire (the organiser of the Nottingham tournament). Now he was President of the British Chess Federation. He told us that in principle the English were prepared to run the match (which was quite understandable as the prize fund was guaranteed by the Soviet Union) and that he proposed starting in August at Nottingham (in August he would have his eightieth birthday).

The question had to be discussed by the executive committee of the BCF, but this was already a formality.

I was not in agreement with the proposed date as there was little time left for direct practical preparation. I do not remember whether they had time to send my reply to England. On Sunday, 24th March 1946, we had friends call on us. We were talking and having tea. There was a ring of the telephone. "It's Podtserob speaking." I hear the well-known

accurate speech. "Terrible news. Alekhine died unexpectedly three hours ago."

The day before, on the Saturday in London, there was a meeting of the executive committee of the British Chess Federation where the question of the match was resolved favourably. Immediately after the meeting Alekhine was sent a telegram with an official proposal to play a world title match with the USSR champion. So I just don't know whether Alekhine had managed to get the telegram in time. The great chess player had passed on.

CHAPTER 5.

The Match-tournament, 1948

So, for the first time since 1886 the chess world was left without its king (the champion had died undefeated). What was to be done?

The first post-war FIDE congress took place in the summer of 1946 at Winterthur, Switzerland. Only six delegates came together there, and they sensibly called their decisions recommendations. Yet amongst these recommendations was a particularly important one—to run a match-tournament whose winner would be declared world champion.

Five of these were nominated on the AVRO result: Euwe, Fine, Reshevsky, Keres and Botvinnik. The sixth was to be settled later. The great international tournament at Groningen in August could play a decisive part in this respect.

However, as became clear after the tournament (I had anticipated this earlier) there were other calculations involved with this event. We will return to this later.

An imposing Soviet delegation was sent to Holland: Botvinnik, Smyslov, Boleslavsky, Kotov, Flohr with Veresov in charge. I requested that my wife and daughter be sent with me, and the committee agreed.

We travelled by train right through Europe with many changes. Finally we were at the Netherlands border. Flohr posed the question in Dutch to the Customs official: "Who will be first in Groningen?" "Euwe!" was the immediate reply. "What about Botvinnik?" "Possibly, if he doesn't... drink too much!" (After the Alekhine-Euwe match in 1935 Russian masters had the reputation as drinkers in Holland.)

So we were at The Hague. From there we were taken in the car of the Soviet military delegation to Groningen via the dike which separates the North Sea from the Zuider Zee.

The Dutch were going through a difficult time. Passenger trains were often made up of goods wagons—much rolling stock had been destroyed. There were clearly fewer cycles as the Nazis had laid a million bicycles as core in the concrete of the Atlantic wall. There was a shortage in food supply and production of industrial goods—almost everything was rationed, and prices were high.

This was also reflected in the organisation of the tournament where the food was very modest. Our ambassador V. A. Valkov (who by the way was a lecturer in Political Economy before the war in my Polytechnic) took care of us and systematically sent ration coupons from the Embassy reserve to Veresov.

Just before the tournament a row broke out. The Dutch had invited five Soviet players in an overall list of twenty participants. But then the organisers increased this number without taking account of the fact that straight after the tournament the USSR-USA team match was to take place in Moscow. If there were more than 19 rounds then the five Soviet grandmasters and two Americans (Denker and Steiner) would be late for the match in Moscow.

There were to be two Dutch participants in the tournament—Euwe and Prins. The organisers suggested to Prins that he should withdraw, but he refused point blank to do so. The next shot came from Euwe, who declared that he was withdrawing. Obviously everybody protested at this. Then there was a suggestion that one of the Soviet players should withdraw—at my request Veresov made known that Botvinnik was withdrawing. We were at a dead end. I tried to persuade Veresov to tell Prins that if he withdrew he would receive an invitation to an international tournament in the USSR. Veresov hesitated, since he had no authority for this.

Master Veresov was always in time trouble, he thought things out slowly. He was very absent-minded and was always wrapped up in thought. During our travels through Europe he always and everywhere kept losing his briefcase (by the way the briefcase was one

borrowed from Flohr) which contained the cash resources of our delegation.

Little Olya's favourite diversion was to keep finding this briefcase and return it to its owner. When we flew out from The Hague Veresov actually managed to leave it behind... in the Embassy!

However, he was born lucky and everything always turned out all right for him. Thus he once went for a haircut in Groningen, and it turned out that the barber was a strong draughts player (the 100-square game). This haircut of a chess master helped to establish contacts between Soviet and Dutch draughts players!

Finally Veresov made his mind up—rejoicing all round. Prins obviously realised that it was up to him to give in, his resistance came from self-pride, but it was all very pleasant now. Unfortunately despite all my effort the promise to invite Prins to Moscow remained just that... a promise.

The players lived in the Hotel Frigge, where the draw took place. At the opening ceremony a vocal quartet consisting of Euwe and his three young daughters, Elsie, Caro and Flyt, gave a rendering in Russian of Dunayevsky's song 'Broad is my Native Land'. This was a very friendly and touching gesture towards the Soviet people.

We played in the 'Harmonie', a fine hall of the local Philharmonic Society. The interest in the event was great, with many spectators. Of the older generation there were Bernstein, Tartakover and Vidmar, the Soviet and American masters have been mentioned already, and there were also Najdorf, Szabó, Stoltz, Lundin, Yanofsky, O'Kelly and others. The main member, however, of the *dramatis personae* was undoubtedly Max Euwe. Many Dutchmen considered that once Alekhine had died then it would be fair to declare Euwe champion; after all it was from him in 1937 that Alekhine had won back the title. Admittedly the Congress in Winterthur had decided otherwise, but FIDE used to have no say in these matters. If only Euwe could win here in Groningen!

I took the lead from the start but Euwe kept right behind me. Our game came in the middle of the tournament.

This was our sixth game (starting 1934). Up to now the score was $3\frac{1}{2} : 1\frac{1}{2}$ in favour of the Dutchman, two wins and three draws. I found it hard to play with him, and understood his play badly. He cleverly used

to change the situation on the board, made certain 'long' moves with his pieces and I used to overlook them. One must give him credit. He started fierce attacks at the first opportunity, calculated variations accurately and had made a deep study of the endgame. Everybody considered him a good strategist, but I cannot help agreeing with Alekhine who wrote after their 1937 match that he considered Euwe a tactician.

Obviously Euwe knew many well-known strategic ideas, but he could hardly be a deep strategist, since he had a pragmatic nature both in life and at the chess board.

So it was not easy for me to play with him, as I was a logician and in many ways a visionary. Our encounter at Groningen was no exception. First of all I got a good position (Euwe played quickly but rather superficially) then I decided to squeeze out more from the position than was feasible. Euwe immediately seized the initiative and I defended with difficulty. Euwe demonstrated in this game how well he had studied the endgame. By the adjournment he had cleverly brought the game into a rook ending which was a carbon copy of an ending Lasker-Rubinstein (St Petersburg, 1914) with reversed colours. The rook ending inevitably transposes into a lost pawn ending. It was time for me to resign.

I ran back to the Hotel Frigge. My wife had a meal ready, but I waved it away. I glanced in the Swedish reference book of Collijn where the endgame section was compiled by Rubinstein himself and stared tensely at the board. There came a tap at the door, and Veresov came in. "How is it?" I started shaking my head sadly, then explained it all. "Mikhail Moiseyevich, possibly you'll find something." Veresov had faith in me.

Suddenly I had an inspiration. In the adjourned position each side had a pawn more. Possibly the pawn ending in this case was drawn? So it was! Then Veresov and I ate our meal with a good appetite and agreed that we would keep it all a secret—what if we went wrong. If the opponent got to know nothing of our analysis then he would not be able to adjust to the new situation.

With a downcast head I appeared in the hall. Two thousand Dutchmen had stood for an hour and a half without moving. Each one was frightened of losing his place and the sight of the Soviet champion's capitulation. Euwe slapped me on the shoulder in a patronising, sympathetic

gesture. In answer I nod my grief, as if saying I realised what was up. Play began, and I made what seemed a pointless move (which actually leads to a draw). Euwe is surprised, thinks about it, throws a testing glance at me and settles down to a deep think about the position. (Game 5.)

That means all is well. I wink at Veresov, and soon the game ends in a friendly handshake. The silence of the grave—the spectators were struck dumb with amazement.

Thereafter things got worse for me. I almost lost to Flohr and suffered a heavy defeat at the hands of Kotov (though I was in a nervous state—there were reports in the Dutch press that Smyslov and Boleslavsky had lost to me on orders from the Kremlin) and the next day at the hands of Yanofsky. Euwe had overtaken me.

Veresov was seriously alarmed and asked my wife to come and watch with our little girl; possibly this would help? Three wins in a row (against Kottbauer, Christoffel and Gulmard) once again brought me into the lead, and before the last round I was half a point ahead. A weight had been lifted from my shoulders. "Now I can quietly make a draw with Najdorf in the last round," I said to the Embassy Secretary Comrade Slysarenko, who had brought the ration coupons for our delegation. "After all, Kotov will draw with White against Euwe."

But Kotov refused to play for a draw, and stated that he was going to play for a win (He had already beaten Botvinnik, now he wanted to beat Euwe). In that case Kotov might lose. "Well then you will win," said the diplomat with the air of an order. So I, oh what naivety, obeyed and refused the draw which Najdorf offered even before play began.

We had to play in the morning, not the evening as usual. Ten years after the last round at Nottingham it was the same story as when I played very badly then against Winter. I was sitting there in a hopeless position and regretting my slips when suddenly Najdorf consoled me: "Don't be upset. Euwe can resign too..." So I came ahead of the former world champion in this obstacle race! Smyslov was third and the question of the sixth player for the match-tournament was settled.

"Do you know how your name sounds in Dutch?" one player asked me. "Bot vin ik. In translation that means 'bot I win'." At the time I decided that this was very flattering and gave a smile of joy.

Almost thirty years later I related this episode to my friend Mr Gaudickel, one of the leading figures in the 'Netherlands-USSR Friendship Society'. He gave a hearty guffaw—it turns out that 'bot vin ik' has the same sense as to beat an idiot!

Of course at that time, in 1946, the Dutch fans of Max Euwe could take the view that my victory at Groningen was an accident. However, later events showed the subjectivity of this viewpoint.

The closing ceremony. There was an immense wreath on the stage. When I was called up two sturdy Dutchmen took the wreath and put it on my shoulders. In my surprise I did not budge (the correct behaviour, laughed the Dutch, that is how one is supposed to react according to etiquette). Of course at that time laurels were unobtainable, and the wreath was made up of some branches with violet leaves.

We travelled to The Hague, where there was to be a reception in honour of our delegation. The diplomats duly gathered, but the grandmasters were missing. They were in Amsterdam spending their last guilders. The ambassador was disturbed; my wife and daughter combined with the staff of the Embassy to entertain our guests, and the whole delegation finally made it.

A Soviet Li-2 plane arrived at a military airport to take us to Moscow. We would not have been in time by train. In the morning we flew out from The Hague, my first flight, but got to Moscow only on the next day, the captain deciding to spend the night at Berlin. Euwe flew with us in his capacity as arbiter for our match.

In the evening the Soviet team gathered in their HQ room of the Hotel Moskva. Play was scheduled for the following morning. The players from Groningen were exceptionally tired, and the success of the Soviet team was in doubt. The First Secretary of the Central Committee of the Komsomol, Mikhailov and Romanov came in.

Mikhailov took the floor and spoke about the political significance of the match. He set the target of shattering the Americans by an even greater score than in the radio match of 1945.

I looked round at my colleagues. Some were dumbfounded, some pale with fear. No, I could not remain silent, otherwise with such directives we would lose the match. Politely, mildly, but precisely I expressed the



i. 1927



2. N. V. Krylenko



3. A. F. Ilyin-Genevsky



4. P. A. Romanovsky



5. G. Ya. Levenfish



6. Moscow, 1955



7. Nottingham, 1936. Front row (left to right): Sir George Thomas, E. Lasker, J. R. Capablanca, A. J. Derbyshire, Mrs Derbyshire, M. Bawa, A. Alekhine, W. Winter. Back row: R. Fine, S. Tartakower, M. Vidmar, E. Bogoljubow, T. Tylor, C. H. Alexander, S. Flohr, S. Reshevsky, M. Botvinnik, the judge Mackenzie



8. My first motor car—a present from Sergo Ordzhonikidze



9. Leningrad, 1940. Botvinnik versus Ragozin



10. The family, 1945



11. Leningrad, 1948. The chess club. G. Rabinovich, M. B. G. Goldberg, M. Taimanov



12. Moscow, the House of Unions, 1948. The match tournament is in progress inside



13. Descending the conditions for playing the World Championship (left to right): V. Ragozin, V. Smyslov, M. Botvinnik, P. Keres, M. Eise, S. Reshevsky, N. Romanov, N. Zuborov, A. Karaganov, V. L. Kosenov, the interpreter



14. 1946: the URSS-USA match



15. Nujdorf-Botvinnik



16. 1948: the match tournament



17. 1948: M. Botvinnik, A. Rueb, F. Rogard, the judge Vinogradov



18. The match in ended



19. Ya. Rokhlin, M. Euwe, M. Botvinnik



20 M. Botvinnik in the laboratory



21. B. Kralic and M. Botvinnik



22. 1958: the return match



23. At the opening of an exhibition in the "USSR-Netherlands Friendship Society"



24. 1968: at Beatsk. The placard of greeting to Euwe, Botvinnik and Muhring



25. With GariK Kasparov



26. Botvinnik's chess school



27. 1978

opinion that we should aim for a 15 : 5 score, that is each player should try to win one game and draw the other.*

A tense silence reigned. "Who else wants to speak?" Silence. There is a feeling that Mikhailov is dissatisfied. He goes out followed by Romanov. Immediately there is a hullabaloo!

The first day we won 7 : 3 (I saved a difficult game against Reshevsky). Then the second round.

I do not know what is happening on the other boards; my game is very tense. First of all as Black in a French Defence I reached a won position after managing to carry out a very neat plan. Then I lost all my advantage, I was already rather worse, and time trouble set in. Reshevsky makes his move and forgets to press the button of his clock. What should I do? In a tournament game I would have reminded my opponent about the clock without any hesitation. That is what I did against Bogoljubow at Nottingham. But this was a team match! I sat quiet and thought calmly. Reshevsky looked at me with surprise, why did I not hurry to make my move, when I was so short of time? He happened to glance at his clock, realised what was happening, jumped up as if stung, thumped his clock button, but in the ensuing rush lost the exchange.

A win for me was doubtful, but I sealed a very cunning move blocking the opponent's passed pawn and preventing the exchange of Black's last pawn. In the morning at home I found a clear winning plan. Friends phoned up saying that the general opinion was that it would be a draw. Keres who had already beaten Fine $1\frac{1}{2} : \frac{1}{2}$ had indicated the correct plan for Reshevsky (it became clear that he had not seen my move). Romanov phoned, "Well, Mikhail, are you going to win?" In particularly important moments he tended to address me in the more intimate second person singular. "I'm working at it, Nikolai Nikolayevich..."

In the adjourned session it was all simple. Reshevsky did not understand the ending. As soon as we finished play somebody gave me a bear hug. It was Romanov. It turned out that this game decided the outcome of the second round in our favour ($5\frac{1}{2} - 4\frac{1}{2}$).

The next morning the strongest players in the world, Euwe, Reshevsky,

* The score in the radio match of 1945 was $15\frac{1}{2} : 4\frac{1}{2}$ in favour of the Soviet side. *T7*.

Keres, Smyslov and Botvinnik met at VOKS* on Georgiyev Square. Fine had already left by air in his hurry to return home, but had left a formal proxy with Reshevsky. Also present were Romanov, the VOKS Chairman Kernenov and A. V. Karaganov who was in the chair. V. S. Kernenov brought in his interpreter (a modest, middle-aged man who was already bald and was badly dressed) who undoubtedly played an important part in our negotiations—we were discussing how to determine the new world champion.

In principle there were no objections to running a match-tournament of six players. As soon as this was apparent I laid on the table a project for 'the agreement of the six' for such a match-tournament. This project had been prepared long ago and carefully thought out in all its finer points. Now I suggested discussing it and signing it.

Then it started. . . . Our interpreter really had to work hard. For about five minutes he quizzed us on it, and familiarised himself with the details. Then he had mastered the topic and understood what each party was in favour of. He started translating simultaneously, then began to match our intonations, shouted in tune with us, became angry in tune with us, was exceptionally polite in tune with us. I never met a translator like this again, a real artist!

Euwe and Reshevsky didn't even want to listen to the agreement and were not interested in its contents. They clearly wished to leave the question open. It was not hard to guess that they had come to an agreement which would be at the cost of Soviet players. This was confirmed later. Strong measures were necessary. "If this agreement is not considered and signed today," I said in unison with the translator, "then tomorrow I shall send an open letter addressed to all players to the world press, and I will tell what happened at our meeting. . . ."

Romanov looked daggers at me, Kernenov made some sort of signs to me. Reshevsky cried out along with the translator "What's this, threats?"

But the pragmatist Euwe quickly caught on to what would happen if Botvinnik wrote such a letter. In a calm tone as if there were no disputes

* VOKS—All-Union Society for Cultural Links with Foreign Countries. Tr.

he requested that the projected agreement be read out. Everything went very peaceably—the scheme was objective. Only Reshevsky demanded that on Fridays (after sunset) and on Saturdays (before sunset) he should be free from play.

"Excuse me, but earlier you used to play then?"

"Yes, but now I have lost my father, God has punished me."

It was impossible to argue against such reasoning, and everybody agreed. Half the event was to be in The Hague, half in Moscow. Each was to play four games against the others, so twenty games in all. The agreement would be signed that evening at a reception at VOKS to mark the end of the match.

At the reception the American players handed to Romanov (for onward transmission to Stalin) a present—a pipe with fine carving which depicted Stalin and Roosevelt sitting at a table playing chess.

Romanov took me on one side, put his arms round me (I guessed straight away that something had happened) and told me that the agreement could not be signed today since he had not yet managed to agree all the financial questions with the government.

At that point I made a mistake which is typical of me. I decided that the game was won in any event, and that one could ease off the pressure. "How much time will it take to arrange these matters? Will a month suffice?" Romanov was clearly overjoyed. "Well then let us make it a gentleman's agreement, without signatures, on condition that if in the course of a month there are no objections then it comes into force automatically."

Euwe was touched by this, the other participants also were in agreement. Everybody parted on good terms.

I phoned up Romanov after a month, but there was no answer. After two months—the same. Yet there had been no objections from abroad which meant that in the West it was already accepted!

In December I was summoned to the Chairman. "We have to repudiate the agreement."

"Why?"

"The whole event must take place in Moscow."

"That decision is wrong."

"What," shouted Romanov, the leadership decision is wrong?"

"Yes, since it is based on wrong information..."

So everything collapsed. It was clear that when Euwe got to know that we had repudiated the gentleman's agreement he would explain to everybody that it was impossible to deal with Soviet players. He would find a way to decide the question of the world championship without us.

I decided to give up chess.

By the way, in the autumn of 1946 I had come across an article by a certain Frey in the house magazine of the Brown-Boveri firm. He had come to the same conclusions about forced excitation control for a synchronous machine as I had in my work for the Candidate degree (from 1944 I had been employed in a technical department of the Ministry for Electrical Power Stations). So I decided to carry my 1937 work to its logical conclusion—to widen the theory and to create the control system and prove the truth of the theory experimentally on a large generator.

I refused point-blank to play in the USSR Championship which was starting in December. The newspapers wrote nothing about me in their reports of the tournament. Everyone was baffled: where is Botvinnik? Relatives phoned up suspecting that something bad had happened. Then there was an interview with me published in *Pravda* and the rumours died down. I promised myself that I would no longer take any part in helping to organise the world championship and went over completely to engineering.

In the spring Slava Ragozin informed me that a decision had been prepared recognising the gentleman's agreement, that we were to become members of FIDE and that a Soviet delegation was to be sent to The Hague for the FIDE Congress at which a formal decision about the world championship was to be taken.

Then it became clear that this decision was being held up, and that there was a danger that our delegation would not arrive in time at the Congress. After much hesitation I decided to consult Alexei Aleksandrovich Kuznetsov. In January 1941 at a rest home in Pushkin Slava Ragozin and I had got to know him. At that time he was First Secretary of the City

Committee of the Party in Leningrad. Now he was working in the Central Committee of the Party in Moscow.

"Don't worry, everything will be all right," I heard him say on the phone in his high-pitched voice, "the delegation will leave in time."

Alas, the delegation did not leave in time. If the Congress had run according to schedule our delegates (Deputy Chairman of the Committee Postnikov, grandmaster Ragozin and master Yudovich) would have arrived the day after the Congress finished. A stroke of luck helped out. An international tournament was being played at the time at Hilversum and the organisers broke off for a day to take the delegates there on an excursion.

The final session of the Congress began. The main question was the world chess championship. The report was to be made by Folke Rogard, President of the Swedish Chess Federation, who was due to inform delegates on behalf of the special commission that they had decided to declare Max Euwe champion (without play!) or to recognise as champion the winner of a Euwe-Reshevsky match (since the Soviet players had repudiated the agreement reached in Moscow a year ago only these two decisions had been examined). The former world champion was here in the hall eagerly awaiting the outcome. At this moment the Soviet delegation headed by Postnikov appeared in the hall. Postnikov asks permission to speak and announces that Soviet players are joining FIDE and that the gentleman's agreement is recognised. Then Rogard announces that in view of the changed situation he will not give his report and that in his opinion the question ought to be considered afresh. Euwe disappears from the hall.

Everything was settled quickly. The only controversial point is where the decisive second half should be played, in Moscow or at The Hague? The FIDE President Alexander Rueb, a Dutch problem composer and founder President in 1924, hides a black and a white pawn in his fists. Zittersteyn, President of the Royal Dutch Chess Union, gives the right of first 'move' to the Soviet delegate as a guest. Postnikov waves his hand in the air and strikes Rueb's right hand. This reveals a white pawn and Postnikov announces that the match-tournament will finish in Moscow!

"You must realise that I had no choice," Postnikov said to me on his

return. "How could I explain in Moscow that I could not succeed in the drawing of lots."

Dmitry Vasil'yevich was a lucky fellow; there were no events at which he was present in which Soviet grandmasters did badly! He had a born gift for establishing contacts with the strong of the chess world. He was liked both at home and abroad. He did not know foreign languages, but easily came to agreement with his foreign colleagues. They would say to him 'OK' and Postnikov would answer 'Polny Oh 'Kei' (Fully OK Tr.).

So to work. Chess was back again, engineering put on one side. I declined the trip to London for the USSR-Gt. Britain match, as I had to put myself in good order and rest well. In December there was due the last test of my strength—the Pan-Slav tournament dedicated to the memory of Chigorin.

I prepared in accordance with my system as in 1941. Once again my training companion was Slava Ragozin. Physical preparation was not forgotten. Long walks and for the first time in my life I put on skis with a rigid fastening. I work at chess with all my energy.

The tournament began, all went well, but in one game I overlooked a cunning trick and lost. The struggle intensifies, and a great deal depends on the outcome of my game with Keres.

Just as in the first round of the 1941 match-tournament I am Black, and just as then the game has outstanding importance. Keres's striking combinative talent, his fine technique and, why conceal it, his elegant exterior made the Estonian grandmaster popular in the chess world. Many saw him as the champion-to-be, just as in 1936 after his victory at AVRO.

As a player Keres had failings which were well known to me. The first was his slight uncertainty when he had to orientate himself in new opening schemes. He preferred on the whole obsolete opening systems. That was why he had a taste for open play. His second failing, a psychological one, was a tendency to fade somewhat at decisive moments in the struggle, while when his mood was spoiled he played below his capabilities.

I decided with the help of this game to rob my main rival in the forthcoming event of his confidence. For first place in the Chigorin Memorial

a draw was probably good enough for me, whereas Keres had to go for a win.

This was a handy situation. I had to aim for a prolonged positional closed struggle in which I could slowly hope for slips by my opponent, slips that are inevitable when one has to look for a win when it isn't there.

We played this game over two evenings. I got the advantage, then a winning ending in which the practical player Keres put up a superb resistance, but that's all.

The aim had been achieved. In the match-tournament Keres would lack confidence against me, his popularity would be diminished, and I had guaranteed first place in the Chigorin tournament. Ragozin came second here.

Once again preparation. Ragozin and I lived in a rest home, went skiing, checked prepared lines in training games. Flohr also agreed to help me. In the match-tournament every participant could have the help of two assistants in the analysis of adjourned games. I asked Flohr to gather material on the rook endgame with pawns on the f- and h-files. I was not familiar with this ending which could well arise in the actual event. Flohr coped with the task very well.

However, my main helper was, of course, Slava Ragozin. He had also taken part, though unofficially in the 1925 simul' against Capablanca, giving successful help to a player from the 'Foodtaste' club. He had not had an easy life. After school he had gone to a bakery where he suffered an injury to his right hand. Then not without difficulty he graduated from a building course, where he was held back by chess which he devoted his whole soul to.

Slava could see on the chess board (and in life too!) what others couldn't see. Sometimes this special 'vision' let him down, but often it gave him the chance for big achievements. It was hard for him to play with me, my play was too realistic for him. Probably each of us learned a great deal from the other. We first met over the board in 1926 in team events. Our first training game came in 1929, and the first time we prepared together was 1936.

He had a mischievous character, he was capable of sliding down the

ski slope on his backside, and loved to play tricks on friends. Basically he was a deep friend and comrade on whom one could rely in time of difficulty!

It was with this friend that I prepared for my key events.

The schedule of rounds for the Dutch half of the match-tournament arrived. By then Fine had withdrawn, and there were only five contestants, so there was a bye in each round. Studying the schedule I was amazed. We were not going to play on public holidays (the Queen's birthday and so on). I reckoned it up accurately and established that one of the five players would have six consecutive days off before the last round! Obviously such a regimen would be harmful to creative and competitive interests and would bring in an element of chance. It became known that all the players would be lodged at the Hotel Kurhaus in Scheveningen, several kilometres from the Dierentuin hall where the play would take place—that was bad too.

Just before play one should take a walk of fifteen to twenty minutes in order to concentrate oneself, and not travel in a car hearing irrelevant conversation—this can only destroy your creative concentration.

I tried to insist that our players should protest about this, but nobody paid any attention to me. Naturally I started to suspect that my colleagues had agreed not to give me any support in such matters: once Botvinnik objects, it must mean that this is disadvantageous to him, so why should we support him? Apparently the interests of chess were to come second here.

Suspicious are merely that—suspicions. They have to be confirmed. Just before our departure we got together in the office of the President. I declared my objections to the organisation of the tournament in The Hague, and explained that it is harmful to the best interests of chess. Everybody remained silent. The moment had come when everything must be made clear.

"I suggest to my comrades that we should be opponents at the board, but friends as regards questions of organisation. I offer you my hand on it."

The hand that I stretched out just floated in thin air. Keres and Smyslov turned their back. The President froze like a statue.

"Now everything is clear," I declared, "from now on I shall act independently in questions of organisation. And one of you will be cooling his heels for six days in The Hague, and on the seventh he will lose."

Once again by train to Holland. At Minsk we were met at the station by a large group of chess players, at Brest a string orchestra struck up. "Isn't this rather premature?" I asked Ragozin. "Bah, this is Estrin—Chernetsky", he replied with a laugh. In truth the whole parade was being run by the young enterprising master Estrin to whom Ragozin had added a second name in honour of the well-known military conductor.

We arrived at the Hook of Holland. Amongst those who met us was Dr. Euwe. We travelled to our Embassy at The Hague.

The ambassador Valkov and our delegation leader Postnikov had a long conference about something and then invited in the players and seconds.

"We are going now to Scheveningen, where you will all be staying on the sea coast at the Hotel Kurhaus, as decided by the Dutch organisers."

"I shan't go. I shall stay in a hotel where I can get to Dierentuin on foot in twenty minutes."

Lord, what a to-do. They accused me of all the sins in the calendar; I was unrepentant. They tried to convince me that this was in the centre of town, and there was no room in the hotels there. At this point a tall, thin, calm figure appeared in the room. It was our consul Filipp Ivanovich Chikirisov. He behaved in an independent fashion, and the ambassador had an attitude of respect for him. The hubbub died down straight away.

"What are these difficulties?"

The ambassador explained the situation.

"All right, I can help. I will try to talk to the owner of the Hotel Twee Staden" (Two Cities).

The consul spoke Dutch. He went to the hotel and fixed everything up. Everything was fine now.

Nowadays Chikirisov is retired, lives in Moscow, and is a member of the management of the USSR-Netherlands Friendship Society. When we meet at sessions of the management we always exchange a smile and a firm handshake.

We settled in, my wife, daughter, Slava and Flohr, opposite the Par-

liament. The proprietor dealt with us hospitably and fed us on excellent chicken. Slava and I checked the distance to the Dierentuin, which was in the Queens Park—just twenty minutes!

The draw was made. My forecast started coming true. Keres was to be free for six days running and then was to be Black against me in the last round of the half played at The Hague. If I could manage to beat him on that day then the forecast would be accurate.

Everybody agreed that since Fine was not in and the number of games had been reduced, we should play a fifth round. So at Moscow there would be three rounds and not two.

The first day I was free. In the next round I was White against Euwe. Could it be that I would still not be able to adjust to his play? Ragozin came with me in a light suit (when I was Black he would wear a dark suit), and after twenty minutes we were at the Dierentuin. I make my way on to the stage and sit at the table. Here nobody can distract you.

The game begins. I succeed in creating complicated play, and notice that my opponent is miscalculating. He is clearly going for a draw, for simplification, but White's advantage keeps increasing and by the time control it is all over. We return happy to the Twee Staden.

Yet there is no point in preening myself. Euwe is no longer the man he was eighteen months back at Groningen, he has clearly regressed. This game is just one episode in a hard struggle.

Then followed a hard draw with Smyslov, and a piece of good fortune against Reshevsky. In a position that was bad for me he was in severe time trouble and overlooked in the course of four moves the loss of two minor pieces.

Finally my game with Keres. He had begun the tournament in superb style with two wins, but I felt that this had no great significance.

The wound which I had inflicted on him at Moscow could not fail to tell, I merely had to keep my spirits up!

Once again it was a closed battle, the accumulation of small advantages. The game was adjourned with me a pawn up. I had to find a forced win. I look for it, but cannot find it. I ask for help from Flohr. Salo does not let me down, and found such a 'quiet' move that it all became clear.

The adjournment was played in The Hague chess club, and did not take long. After the game some American general rushed up and took my hand for a long time. His American accent was beyond me, but I realised that there are chess players in the USA amongst the Armed Forces as well!

So 3½ out of 4, a good start. Then came three draws, not without their ups and downs, and at last poor Paul sat down to play me after his six-day 'rest'. Of course he could not play, and by the seventeenth move it was settled. He was so shattered that he sat there for a long time wondering what decision to take. About thirty seconds before he would have lost on time he stopped the clock, signed the score sheet and left without saying a word. The next day the Dutch newspapers noted this unusual way of recognising defeat.* (Game 6.)

So, six out of eight. Now for Moscow.

We travelled to Moscow by train. In Berlin Postnikov, Keres, Reshevsky and Bondarevsky (Keres's second) left us to travel to Moscow by plane. Reshevsky was in a hurry as he could not travel on the Sabbath, and Keres wanted to spend some time in Tallin.

After a day in Berlin we continued on our way. Euwe was accompanied by a whole cohort of Dutchmen, his two seconds, his wife and daughter, and Reshevsky's two seconds (he had 'ceded' his two seconds place to Dutchmen) as well as others. We arrived at the Polish frontier at Rzepin. Somehow they seemed to take a long time checking our passports. Finally a frontier guard appeared to say the Soviet players may proceed, but the Dutch were to return to Berlin for a Polish transit visa. What a business! It turned out that in the bustle they had forgotten in Berlin about transit visas for the Dutch—there was no Polish consulate in The Hague.

So once again a crisis loomed. Where was the guarantee that the Dutch would turn east again from Berlin instead of returning with Euwe to the West? Euwe, of course, as a true sportsman was prepared to play the event out to the end (though he had only 1½ points out of 8), but if a dispute should arise (from Berlin onwards he was considered to be our

* Some form of gesture, normally a handshake, is usual when resigning in a formal tournament. *Tr.*

guest, and we were obliged to get him to Moscow) couldn't the Dutch Chess Union use this as an excuse to call him back from the tournament? Would we then manage to finish the event at all, and would the new champion be recognised by the chess world?

No, we must all travel on together. I explained the situation to Vagapov, deputy leader of the delegation, who agreed with me and we went to have talks with the frontier officials.

They just waved their hands—the law is the law.

"May we phone through to Warsaw?"

"You cannot contact Warsaw, but as for Berlin, yes."

We phoned Berlin contacting the deputy Soviet Political Councillor. He realised the situation, promised to contact Warsaw and asked to us to call him back in about twenty minutes. We went to the man in charge of the train and asked him to hold it back.

"Properly speaking I don't have the right to do that, but the passengers are happy that they are travelling in the company of the chess players. But will you stand up for me in Moscow?"

So the train was held back, and we phone Berlin again.

"Everything is in order. The Polish Interior Ministry has sent orders to the frontier."

We wait, but no orders come. We phone Berlin again. The deputy councillor asks us to ring a little later. After half an hour he informs us that he has spoken to the Ministry of Foreign Affairs. Wait!

We waited for a long time—it was all as in the old days. We phone again. The deputy councillor promises to contact Warsaw again. A little later we learn from him that the office of President Bernt is now in possession of all the facts, and this time there will be no slip-up.

The chief of the train was already in a state of despair, the passengers full of anger. At Brest in those days there was a change of trains (at that time they did not change the undercarriage for the wider gauge) and it was clear that the Brest-Moscow train would not wait for us, as we were more than five hours late!

But then the frontier officials gave permission for the Dutch to proceed through Poland and we could be on our way. However, I asked the chief to wait a moment, phoned Berlin again, thanked the deputy councillor

and asked him to get authorisation from Warsaw for our train to pass through Poland at maximum speed (it was already quite out of sequence with the timetable!).

We finally pulled out after a delay of five hours twenty minutes. All the stops were reduced to the minimum, and we went through Minsk Mazowiecki without stopping. On arrival at Brest our lateness had been reduced to two hours. The Moscow train was waiting for us.

In Brest a fresh trial awaited us. The customs officials were checking Euwe's luggage and found some thick exercise books. "What is this?" It turned out that the writing was in Dutch and it was Euwe's secret openings analyses. As these could not be checked at Brest, where the Customs did not know Dutch, according to instructions the notebooks should be taken away from Dr. Euwe and forwarded to Moscow for further study.

The situation is as bad as ever. Along with Vagapov I tried to talk the customs officials round, they themselves realise what fateful consequences this might involve. They had already phoned Minsk and were awaiting permission to make an exception to the rules.

There came a refusal: "Inform Comrade Botvinnik that Soviet laws are binding on everybody." What should we do? "Let us go to the local Party office, from there we can contact Moscow direct on the official government line. We still have time, there's a car waiting in the station approach." We were hurrying down the staircase, when there is a cry 'Come back' from above. We climb back and learn that Minsk themselves have asked Moscow and permission has been granted. Now hurry to the train.

We set off and I go into the restaurant car. A distraught Euwe is sitting at a table. I tell him that everything is in order, the Doctor shakes me by the hand for a long time.

"But can I be certain that there is nothing in your notebooks which might harm the Soviet state?" Euwe solemnly holds up two fingers as a sign of making an oath.

"Yet aren't your variations directed against Soviet players?" There is laughter all round. Yes, the Moscow section of the match-tournament is now safe, and I can go to bed.

After our arrival we had a few days rest. One morning I took a walk with my daughter along First Meschansky Street (now Peace Avenue). When I got home there was a call from the Sports Committee, "Go at once to the Party Central Committee. They are waiting for you." I duly report to the CC, a duty officer sends me into an office. In the corridor I meet a smart middle-aged man. "Why are you late?" he raps out in military style. I deduce that this is the new Chairman of the Sports Committee, Colonel-General Apollonov. We waited in the reception room. About fifteen minutes later Voroshilov goes past us into the office (at that time he was in charge of Physical Culture in the Council of Ministers, and had received the players in the Kremlin before we set off for The Hague). Soon we were called in. It was the office of A. Zhdanov. Zhdanov was walking about, the others were seated. One felt that the atmosphere was tense.

"We wanted to talk to you about the match-tournament", began Zhdanov. "Don't you think that the American Reshevsky will become world champion?" (It transpires that even at the very top there are chess fans!)

This question did not come as a surprise to me. I had figured out that before the tournament certain circles had formed the opinion that the most likely winner would be Keres, not Botvinnik. In this regard they had come unstuck, but how awkward to admit that you are wrong! Now, it seems, in order to muddy the waters they were trying to prove that Reshevsky might win!

After the losses which Keres had suffered at my hands he was no longer quoted as future champion, but they had found a new 'favourite'.

Just before this Misha Cherkov, Chairman of the Leningrad chess section, had told me that, on returning from The Hague, grandmaster Bondarevsky had given a talk at the Leningrad Physkultura meeting explaining that Keres was in bad form, Botvinnik was just lucky, but as for Reshevsky he was a real talent. So far, he claimed, Botvinnik had more points than Reshevsky, but the American had more talent. This was the most important feature and was bound to tell in the Moscow half of the match-tournament.

Obviously one could appreciate the feelings which had overcome Ke-

res's second after the events at The Hague, but it seemed that these 'theories' were now being disseminated as the authoritative opinion of experts.

"Reshevsky may become world champion", I said and paused here; all became still. Zhdanov stopped walking about. "But this would indicate that nowadays there are no strong players in the world." The atmosphere lightened. I explained that Reshevsky is what was once called a *Naturspieler*, an original player, but limited in his understanding of chess, insufficiently universal. The main thing was his chronic fault of being unable to apportion his time in the course of the game. Time trouble had become a systematic part of his play.

Reshevsky's career was unusual. As a 6-year-old child prodigy he gave simultaneous exhibitions to adults, then gave up chess to complete his education, and returned to the game only in the 1930s. He became a strong grandmaster quite quickly and regularly won the USA Championship, but his international successes were not outstanding, apparently because of his failings both as a chess artist and a competitive player.

My explanations seemed convincing.

"Very well," said Zhdanov in conclusion, "we wish YOU (a word he stressed) victory."

It became clear that the 'theories' of my detractors were rejected. I expressed my gratitude for the confidence reposed in me and left.

After this conversation I could not properly analyse my feelings straight away. Then I understood everything and my thoughts became sorted out. I felt in a good mood: the main thing was that the Party leadership assessed chess very highly and devotes attention to it. But hasn't chess come to deserve this?

My first game in Moscow was with Euwe. In those days my favourite weapon was the Meran Variation (in the Slav Defence) both as White and as Black. Euwe was also considered a connoisseur of this variation. But he couldn't know that as long ago as 1941 I had found the right plan in the system which he happened to choose in this game. The new plan had been verified in a training game with Ragozin in 1941.

It was easy for me to play. Once Euwe sensed danger he adopted the standard decision of playing for simplification. But there were still

queens on the board and Black's king was stuck in the centre! The centralised white knight was sacrificed, but to make up for this White's major pieces surrounded the enemy king. Euwe gave up his queen, but this didn't help. Probably this is my best game in the match-tournament (Game 7).

Then I won a second game against Smyslov to give me 8 out of 10!

But in the next round a frightful blow awaited me. To my shame I did not know a certain opening system in the Nimzo-Indian Defence which had been introduced by Capablanca of all people. I maintained the equilibrium with difficulty in this game with Reshevsky, but then the tension got to me and I lost. An unpleasant defeat—I had just been arguing that Reshevsky was not dangerous and now this.

However, this was only an episode in the struggle. A win against Keres strengthened my position as leader, then comes draws with Euwe and Smyslov and my fourth game with Reshevsky.

He played the opening stage very accurately, but in his choice of opening, the French Defence, he was mistaken, as I had been playing it for over twenty years. At the decisive point he went wrong and the advantage passed to Black. In time trouble Reshevsky made his position even worse and the adjournment could now make no difference. After sixteen of the twenty games I was so far ahead that if I were to withdraw now I would still share first place! I needed just one draw to ensure victory.

The 9th of May 1948. It was a public holiday—VE Day. The House of Unions was besieged by chess players. I was White against Euwe. After the opening moves the position became simplified, I offer a draw, but he refuses.

"All right, let us carry on." Euwe cannot cope with his nerves and he agrees to a draw on the spot. An ovation thunders out in the hall. The world champion is a Soviet player. This was the success not of an individual but of a whole generation. It took the younger generation of Soviet masters something like a quarter of a century to win the world title and reach the heights of chess mastery. The principles of the Soviet School, the investigatory nature of the new direction in chess exerted an influence on the development of chess thought. The new champion was recognised by the whole chess world.

The tournament arbiter Milan Vidmar, well advanced in years, culmed the audience and play was resumed. I go behind the stage where the Minister of Power Stations Zhimerin is waiting for me and invites me home. "Good, but let us leave by the October Hall entrance, there is no crowd there."

"We'll go out by the Hall of Columns entrance," was the unexpected decision of the Minister, "we should mix with the people."

So we went to 'mix'. Properly speaking we did not walk, but were rocked along from side to side in the enthusiastic crowd which was filling Hunters Row. No matter how friendly their attitude to us we could make progress only at the speed of a tortoise. Finally we forced our way to the 'Pobeda' (the Gorky car factory had only just started producing them) which was waiting for us and set off.

In my last game with Smyslov I offered a draw. "But will you play to win against Reshevsky?" (Vasya Smyslov was already dreaming of second place.) "I'll try!"

This was a complicated business. I decided to play the Four Knights against the American. In this opening White is practically safe from defeat, and Black has to take risks if he wants to avoid a draw. Reshevsky, of course, did take risks and lost.

There remained my final game with Keres. As Black I fell into a difficult position, but Keres committed an inaccuracy and it became easier for me. I was thoroughly tired and thought for twenty minutes without finding that I could have forced a repetition of moves (after the game Paul pointed out this possibility) and I lost.

Some people concluded that I had lost on purpose (I even received a cordial telegram from Estonia). I confess that I have drawn by agreement—with Lisitsyn in 1931, with Flohr in 1933 and others—you can't count them all, but in my career I have never deliberately lost to anyone. (Later on our hostility turned to friendship. Paul did a lot of good for me, and I tried not to fall behind in this. In the summer of 1977 I got to know a pleasant lad from Tallin at the sessions of the junior chess school. Jan Elvest played chess in the style of Keres—it was pleasant to find out how much Paul had done for the development of chess, particularly in his native Estonia.

There is no doubt that after the death of Alekhine the death of Keres was the greatest loss for chess over the last few decades.)

Gayane Davidovna was also overjoyed. Fourteen years had gone by since we first met on 2nd May 1934. Yaasha Rokhlin, now Chairman of the Trade Unions Chess Federation, arranged a party. He was living then on Vasiliev Island. His wife was an artiste of the ballet, and she invited her girl friend. Both of them were studying under the notable teacher of ballet Agrippina Yakovlevna Vaganova. When Rokhlin once introduced me to her he said, "Grandmaster of ballet, allow me to introduce to you the grand master of chess."

We returned late at night from the island. The Nikolayevsky Bridge (now named the Lieutenant Schmidt Bridge) across the Neva was already swung open, the Palace Bridge was about to open. It was raining, my hair was really dishevelled and I was really worried that I would not appeal to the pretty girl. But my fears were in vain and exactly a year later at the flat of my wife's parents there gathered relatives and friends to celebrate the wedding.

Yes, it had not been easy for my wife in this difficult struggle.

At a reception at VOKS Romanov (he was a member of the Physkultura Committee at that time) embraced me and said, "I'm confident of a fifteen-year reign." He was not wrong, but he could not have foreseen that there would be two breaks of a year!

After the tournament it became harder than during the actual event—meetings, the closing ceremony, concerts, official conversations. The most difficult thing was without a doubt the consciousness that I had become champion.

This was an obstacle in living, but I managed to withstand the pressure. My instinct for survival asserted itself. Soon I forgot about the fact that I was champion, and when I did remember and felt somehow uncertain, then I reflected: What is it to be champion? All it means is that you have won an event for the world championship, nothing more than that!

Now I had to return to engineering. There too I had to bring to fruition what I had started. This would also be useful from the competitive point of view—once again 'hungry' for chess would appear.

CHAPTER 6.

Doctoral Dissertation

THE chess storm (i.e. the 1948 match tournament) had passed, and I had to return to calm engineering.

Formally speaking I was still working as before, in the technical section of the Ministry of Power Stations, but my responsibilities as an engineer were minimal. My main work was in TsNIEL (the Ministry's laboratory).

Here I was in charge of a small group of researchers. We were working on a control system which, according to a definite law, would act upon the excitation of a synchronous generator. Along with this the nature of the generator was changed. It could work continuously with transmission of power to a long distance away with a phased angle in excess of 90 electrical degrees (that is the angle between the electromotive strength of the chain of the generator stator and the tension of the network). A normal synchronous generator is not stable in such a working régime.

I. A. Syromyatnikov was the deputy head of the technical department. Ivan Arkadyevich was a rare type of talented engineer. A person of small stature with sparse red hair, stocky, slightly stooping. When he got excited he would start stammering. At first sight he produced a rather strange impression, yet he had the gift for taking bold penetrating decisions in original situations.

Syromyatnikov's gloomy exterior concealed a lively spirit who was full of humour. He ate a great deal, and was inclined to take a drink. "I eat a lot," he used to say, "but on the other hand quite frequently You simply have to drink, otherwise you will die and will not know for what reason. You have to go to bed early in order to get up later." (He used to arrive at the Ministry at 6 a.m.!) His drinking bouts were

normally on a Saturday after which he would dance something like a gopak and then go to bed.

He lived in the flat above us, and when he danced the ceiling shook and the chandelier moved about. Once during a world championship match my wife asked him not to dance so as not to disturb me. Later on he would tell the tale, "Botvinnik and I won together—I didn't dance."

Unfortunately like all mortals he and I were not without human failings, and though I continued to have an endearing feeling for him our paths diverted later on.

The tests went well. The generator worked steadily at full load and with a high power-angle. The stability was ensured by forced regulation—the problem posed in my Candidate's dissertation of 1937 was now solved.

I could draw up the Doctoral thesis.

At the end of 1949 I presented my doctoral dissertation to the Academic Council of the Krzhizhanovski Institute of Energy. I made a trip to Leningrad to Goriev who had a favourable attitude towards the work and gave his agreement to be the official opponent. N. N. Schedrin was working in Tashkent at the time and he too gave his agreement. I do not remember who was scheduled to be the third opponent. The defence was set to take place in June 1950, but in May something unexpected happened—a telegram from Leningrad informed me that Goriev was withdrawing from being an opponent on health grounds. Yes, the state of his health was far from good.

The defence was cancelled, but this was a trifle compared to what was inevitably to follow.

I decided to defend the dissertation in Moscow (and not Leningrad) on grounds of principle, not wanting to be accused of cowardice. Just before the war I had had an unpleasant conflict with a certain Moscow specialist (he is no longer alive, so I will not give his name). My Candidate's dissertation on forced regulation was published in 1938; his Doctoral one on the same topic—in 1940. The man concerned did not mention my work directly, but indirectly ran it down. Not unnaturally I was infuriated and by reason of my youth put in a formal complaint to VAK, the Higher Arbitration Commission. Of course this produced no con-

sequences apart from one—the colleagues of this specialist (and he himself) took careful note of this young complainant! So I decided to defend the work in Moscow. The law on dissertations is stern and just; it is hard to fail good work without bringing discredit on the Council.

Yet when Goriev withdrew from being an opponent I was left isolated in the face of the 'avengers'. Soon I was summoned by Academician Vinter, the famous constructor of the Dnieper Power Station Complex.

Vinter was Krzhizhanovski's deputy at the Institute and at the same time one of the heads of the technical Council at the Power Station Ministry. It was at the Ministry that our talk took place.

"Well now," said Vinter gloomily (he never spoke any other way), "you will have to take your dissertation back for revision. Markovich has said that there are mistakes there." Markovich was one of the best known specialists in energy transmission.

"I am confident of my work, and insist that everything should proceed in accordance with the law. The work has to be given a formal assessment, and I have only one request of you, Alexander Vasilievich. Let Markovich provide a written reaction." (A quarter of a century later Markovich and I were reconciled, several months before his death. He praised my doctoral work and I criticised it. We both got hot under the collar in our day, possibly to no good purpose!)

Vinter raised his head (normally he held it bent forward, as is the custom with many leading people) and looked at me with surprise and sympathy. He himself was distinguished by a strong character and could appreciate my behaviour. "Very well," he said.

Yet it was not easy to overcome the resistance. No one wrote a reaction, neither positive nor negative. I had to put in a complaint about an infringement of the law. Unexpectedly I received a phone call from Krzhizhanovski himself!

"Don't think that we are against you, everything will be fine," I heard the exact old voice say over the line. In conclusion he said, "Check and mate!"

But even after this there was nothing good except that there were new tests and with even greater success.

My domestic situation was difficult. My mother had been ill for a long time. My wife had fallen ill after the 1948 match-tournament, not being able to get over all the stress and strain, and my daughter's health was not too good. I had also got fed up of trailing round rest homes when preparing for events—almost everyone of the holiday-makers considered it his duty to talk to me about chess and give useful advice. So I decided to build a dacha!

On 2nd May 1949 Rokhlin and I went on a reconnaissance trip to Nikolina Gora. This small settlement on the Moskva river had appealed to me earlier when I was preparing with Ragozin in 1945 for the USSR Championship and stayed in a rest home there. We drove up to the river, the wooden bridge was dismantled and the water still quite high. We went across to the left bank on a ferry and went to look for Prokofiev who at that time had bought a dacha in the settlement from V. Barsova. The composer was bedridden with high blood pressure.

"I can't tell you anything, go to Samosud, he's just finished building. And yes, "he said coming to life and addressing Rokhlin, "where is the book on the Steinitz-Lasker match of 1894 which you promised me long ago?" Rokhlin was embarrassed and the book was duly delivered in a few days' time.

Samosud* gave us a friendly welcome and showed us his Finnish house. His wife fed us on tasty cutlets and a bottle of champagne was opened to celebrate May Day. Samosud came down to the river with us and together we admired the Moscow landscape (there is a beach there now for diplomats). But how was one to proceed? Samosud told us in confidence how to get to know about an available plot of land. His advice proved reliable, but one can get permission to take a plot in the water-conservation zone of the Rublyovsky water pipe only by government decision.

Zhimerin helped. In January 1950 permission was received and in February I travelled to Kondopaga by Lake Onegin with my completed plans to order the timber.

At the end of May the whole house was already lying on the site.

* Samosud (born 1884), a well-known musical director. *Tr.*

The wood was so thick that six trees had to be chopped down to drive up to the building site.

I found a gang of Yegorev carpenters. The foreman Ivan Fyodorovich was small and thin but the six workmen recognised his authority. How could they not do so when one saw how skilfully he handled the 6-metre-long beams!

They worked from dawn till it was dark (one of them suffered from insomnia and would wake the others) and then had supper by the light of a kerosene lamp. There was no electricity or water on the site at that time. I was indebted to my neighbour Panfyorov* who let them take water for the brick foundations from his small bathroom—there was no water any nearer.

The work went forward slowly, at first it seemed that they were not working at all, but just wandering about and looking for marked beams. When the house was half ready things went more quickly. The first layer of beams was installed on 5th June. On the 26th everything was ready for a 'banquet' (instead of a table we dragged out on to the veranda a chest meant for rubbish disposal). Obviously Rokhlin and his wife were there. We had only just sat at table when the foreman hit me hard on the shoulder. "We've forgotten to put together a lavatory for you." Yet twenty minutes later the feast began; the lads knew their job well.

Soon my carpenters were a bit tipsy and in the countryside tradition started singing. They sang in unison, but badly. I was afraid that we would get it in the neck from neighbours, particularly from Panfyorov, but he was certainly no stuffed shirt, so everything turned out well. A base for building up my health and strength and for chess study had been constructed.

Three years had gone by unnoticed and I had to play chess again. My rival in the world championship had already emerged—young David Bronstein.

By that time the recently confirmed rules for world championship matches had come into force. In the winter of 1949 I had published a draft for these rules. As a preparation I studied everything that had been

* Panfyorov, F. I. (1896-), a well-known Soviet writer. *Tr.*

published on the topic earlier. In drawing up the draft I took great care to ensure that the two players in the match had equal rights. The champion had just one advantage—in the event of a drawn match he kept his title. To take the title the challenger had to outstrip his opponent (win the match).

In July 1949 the twenty-fifth anniversary of FIDE was celebrated at the Congress in Paris. The leader of the Soviet delegation was D. Postnikov. He and Ragozin had many things to concern them, and points to do with the rules of the world championship were allotted to me.

The founder President of FIDE, A. Rueb (Holland), was retiring from his post. He was opposed to the acceptance of the rules at this Congress (not wanting to cloud the Congress by discussions), but finally he withdrew his objections. The incoming President, F. Rogard (Sweden), also had no objections—he needed the support of the Soviet delegation. A commission was formed under Rogard's chairmanship which was to recommend a draft of the rules to the General Assembly.

The commission quickly reached unanimity, but over one detail Rogard dug in his heels, and it was decided to refer this disagreement to the delegates for discussion. Rogard read out his draft point by point in a French version which he had drawn up, while I followed the report in the Russian version with the aid of an interpreter.

This young and very pleasant interpreter, the son of Russian emigrés, has a fine command of Russian and French (at home the family spoke Russian). When we got to the controversial point I naturally wanted the chance to speak, since Rogard was reporting his own version to the Assembly.

"There's no need, everything is in order. The French version has it in the form you proposed," explained my colleague. "Surely that can't be right?" "Yes, exactly..."

Then Rogard departed from his text and explained the point in the way he had suggested at the commission. My interpreter protested pointing out that this did not correspond to the written text of the report from the commission.

Rogard went red in the face with anger and raised his voice at the young man. "Excuse me," the latter countered, "but if you wish to write

what you are saying, then there should be an acute accent in this French word, and not a grave accent."

Rogard was dumbfounded. The Swede had been let down by his inadequate knowledge of French. I must give him credit—he raised his hand in a sign of capitulation and then shook hands with our interpreter. This point in the rules was adopted in my version!

The old President was also satisfied, everything had gone smoothly, and the delegates gave him a retirement present of a clock.

We were staying on the Boulevard Souchet. It was unusually hot and Ragozin and I tried to escape it in the Bois de Boulogne. We decided to call in at Versailles. We wandered along in the park, but hadn't the strength to go on, it was very hot.

A carriage drove past us, the only one in the park permitted as public transport. "If only we could ride in it," I said longingly.

Slava gestured to the coachman at once, he stopped and my companion lolled on the seat.

"Misha, I am your guest. Let's go!"

Slava begged me, but he did not spoil my good mood (the fair rules after all had been accepted).

I prepared for the title match with Ragozin, this time at Nikolina Gora. We went skiing, analysed, but (unpardonable self-reliance) we played but few training games. I under-estimated Bronstein, and possibly under-estimated the dangers involved in a three-year lay-off from chess.

As usual I started collecting recent chess literature before preparing. Over the three years of my inactivity in chess there had been a lot of printed material build up. I found out that foreign magazines and books which had come to the Physkultura Committee were stored in the library of the Institute of Physkultura, but were not available to be taken away on loan. I went to the Committee Chairman Apollonov and asked him to give the appropriate order to the library.

Apollonov sat silent for a long time, and then asked, "Well, how did you prepare previously? Did you study the literature?" "Of course, Arkady Nikolayevich, I simply had to." "Then why do you need to study it again?"

I was struck dumb with amazement. Such a wise thought had never entered my head! The reason was soon revealed. Bronstein and Apollonov were members of the same sports society. So I got hold of the magazines without his assistance.

Bronstein was undoubtedly strong then, though his talent was marked by one-sidedness. He was good at complicated piece play, and disposed his pieces very successfully from the point of view of general considerations. As a result he was dangerous in the middle game, but when it came to accuracy of analysis when one had to look for exceptions to the rules Bronstein was not so strong. Accuracy of analysis is necessary in the endgame where a player has no right to make mistakes, just like a sapper. If Bronstein had been strong in the endgame then I would have assuredly lost the match to him. On top of that I was favoured by the human and competitive failings of the challenger—a penchant for eccentricity, affectation and naivety in his competitive tactics.

The first four games ended in draws, not without some adventures. I lost the fifth in a real flop. The sixth was adjourned after a tense struggle in an endgame with the better of it for my opponent.

Ragozin gave me inestimable help in the analysis of the adjourned game. He suggested a bishop sacrifice to activate the black king. I elaborated the idea and when we resumed everything went smoothly. The time control came at move 56, and in a clearly drawn position it was time to sign the peace. Bronstein with his piece up still wanted to play on a little, made a weak move, and after Black's reply capitulated. This was the first, but by no means the last, level ending which I managed to win in the match.

There were two days off, so I asked for a car from the Physkultura Committee and went with my daughter to the dacha. We could be driven only as far as the Moskva river—the spring thaw floods had begun. We crossed in a rowing boat to the left bank, and then went on on foot.

On the morning of the next playing day I learned early in the morning that the Mozhaisky ice was on the move (at that time there was no dam by Mozhaisk) and Nikolina Gora was cut off from Moscow. I ran to the bank of the river—the drifting ice is a fine sight, real power! Then I went to the "Sosny" rest home to phone Moscow.

"Nikolai Nikolayevich, you won't default me?" Romanov gave a laugh (he had become Committee Chairman again by this time, Apollonov had left). "No, we won't; after all you went to the dacha with our consent."

The head of the rest home and I went to the river bank. A miracle—the river was clear of ice. It so happened that there was an obstruction by Kapitza's dacha. A boat was forthcoming at once, and I just had time to ask for Romanov to be phoned so that the game would not be put off. I even had time to have a meal before play! Later on Romanov told me how they had wanted to send a light plane to deliver me to the right side of the river.

Bronstein knew nothing about what had happened, whereas I felt marvellous after many hours stay in the fresh river air. My opponent once again botched a level endgame in the fifth hour of play, and the adjournment session was a simple business.

In the ninth game there was an unpleasant dispute. After White's forty-first move Bronstein was engrossed in thought, and did not notice the arbiter K. Opočensky (Czechoslovakia) coming up to the board. Bronstein noticed the judge only after the request, "Please seal your move".

This was awkward for my opponent, since he tried to get me to seal throughout the whole match. His calculation was clear: Botvinnik, lacking practice, and tired out after five hours' play, would take a long time over the sealed move, and would probably seal a bad one. Then he would have an agonising night of analysis and would have little time left before the next time control.

From the practical point of view this looks sensible, but every 'rule' has to have its exceptions!

Bronstein made out that he had not heard the arbiter and made his forty-first move on the board.

According to the rules this was a so-called 'open sealed move' and there was now nothing to be written down, but Bronstein made a scene of it, and demanded that White should now seal. Opočensky was distraught, and could not make his mind up. There were shouts of 'Shame!' from the audience addressed at me (obviously from colleagues of my opponent from the same sports society; and to be honest, as always the sympathies of the audience were on the side of the younger man).

The matter was resolved after the intervention of G. Stahlberg (deputy arbiter). He reminded Opocensky of the rules, and the latter realised that his hesitation was out of place.

On the whole the games were not consistent; interesting ideas were spoiled by technical slips. After 17 games the score was 3-3. In the eighteenth game I balanced on the edge of the abyss. If Bronstein had sealed the right move (he had good reason not to like sealing!) I would have suffered my fourth loss. White made the wrong choice and I exploited a paradoxical saving chance which was found after many hours of analysis. In the nineteenth game I once again managed to win a drawn endgame.

Yet my strength was giving out. Once again we had two free days and I decided to have a good sleep. I even slept during the hours that were normally playing hours, a typical and dangerous breach of sporting régime. I lost the twenty-first and twenty-second games without a fight. The score was 4-5 against me.

Now if I did not win the twenty-third game with White then the loss of the match seemed certain. Yet this game developed not too well for White. The crisis came after White's thirty-fifth move. I had about three minutes left on the clock, Bronstein had about ten minutes. Black could win a pawn, but he would be left with two knights against two bishops (risky in the endgame!). Bronstein looked at me, at the clock, at the audience and . . . went for the win of the pawn! In the hall applause broke out at once; this happened every time when Bronstein sacrificed anything or won anything. On this occasion my opponent realised from my joyful face that he had gone wrong. He waved his hand at the audience, the hand-claps died away, but it was too late. On my forty-second move which I was to seal I had a winning possibility.

I thought for about twenty minutes and sealed a weaker move. . . . Only at 8 a.m. the next day was a hidden possibility discovered (I even started with palpitations due to the emotional stress) and hope of victory appeared.

Once again in the endgame Bronstein was not at his best. After 15 moves of the adjournment session his pieces had fallen into a Zugzwang position and Black resigned. The final, twenty-fourth, game brought no

change; in a hard struggle I had managed to defend the championship title.

Despite my unfortunate play the match was a blow for Bronstein, both a chess blow and a psychological one. He never managed to repeat his success.

The match was over, and straight away there was a pleasant surprise. Finally official opponents were announced for the defence of my dissertation. Two years earlier I had got to know Ya. Tsypkin, one of the leading Soviet specialists of control theory I had consulted him about the correctness of the methods which I was using in analysing the stability of the synchronous machine.

He was a man of exceptional ability, knowledge and memory. At our meeting, and without any preparation at all he expounded the content of my Candidate's work published in the magazine *Electricity* in 1938. He was about 30 years old then, and after service in the front line he had quickly defended his doctor's dissertation. He told me straight away what I should change in the form of exposition of my work in order to remove the possibility of criticism.

If I remember correctly it was Tsypkin who asked his friend Professor L. Goldfarb to be my opponent. Goldfarb too was a prominent specialist in automatic control, and my work pleased him. He found a second opponent, Professor D. Gorodsky (later I worked with him for some years and we became friends). The third opponent was N. N. Schedrin.

The defence took place on 28th June 1951. The Chairman was Winter and M. A. Shatken (who was over 80 then!) was present by accident. He had come from Leningrad for a meeting of the Academy of Science, and, learning about the defence, did me a great honour.

The defence turned out to be reasonably successful. Winter supported me successfully, but the decisive part was played by G. N. Petrov (a leading specialist in transformers and a personal friend of M. Vidmar*). He was Chairman of the Expert Commission of VAK for Electrical Engineering and so he could not give a direct assessment of the work,

* M. Vidmar (1885-1962), Yugoslavia's first grandmaster; Professor of Electrical Engineering and later Dean at Ljubljana University. *Tr.*

but he gave some advice to the candidate: before sending the work to VAK add a supplement to the dissertation, since in the eighteen months since it had been completed there had been significant advances in the field. Petrov's indirect intervention meant that the work should be approved, otherwise there was no point in sending it to VAK.

Petrov used to compose chess problems and even published some before the First World War. He was without doubt one of the cleverest, most honourable and exact people amongst our electro-engineers. When I think about him it is always with an involuntary smile.

I slipped through by a miracle. After several restrained comments I was certain that I had failed, so that later on I did not realise straight away that I had received approval. Out of nineteen members of the council five voted against. One can guess who they were, but let that be!

Now it was passed to VAK. If the work had been stuck for eighteen months with the Electrical Institute, now it lay idle for the same length of time at VAK. In all, the dissertation had taken three years to be assessed, a longer period of time than was needed to do the research and write it up.

The Expert Commission approved the dissertation without calling for supplementary reviews. But at a plenary session of VAK one of my 'friends' made a statement to the effect that the work made use of doubtful methods of analysis (a comment already made in his work of 1940 by the same person) and the work was referred back to the Expert Commission. I was informed of all this subsequently by the Deputy Chief Academic Secretary of VAK, A. Sergeev (who was Moscow Champion in 1925, and naturally sympathised with me).

So this time the Commission had to call for reviews. A favourable one came from Leningrad (a comrade of mine caught sight of it by accident on the desk of Academician M. P. Kostenko). There was another one, from Moscow, whose author I do not know, and the content was uncertain. It would be dangerous to write an unfavourable review. In that case the candidate would be summoned before the Commission and would have the right both to present his own retorts and answer questions from Commission members. Then the reviewer could find himself in an unenviable position.

In the autumn of 1952 our control system was installed at the Moscow Institute of Energy on a model of power transmission system in the Department of Professor Venikov. He was familiar with my work, and as early as 1949 volunteered to be a reviewer of my brochure that reproduced the theoretical side of the work. To be honest he was a person of complicated character, but he had a rare feeling for what is new and his intuition did not let him down. The operation of the generator with forced regulation greatly pleased him. Later it came out that two weeks later he gave a report on my work to the Commission and praised it highly. Once again there was a discussion at a plenary session of VAK, but this time it was a short one.

"Well, are there any doubts now?" "No."

So it was all over and I could receive my diploma as Doctor of Technical Sciences.

My chess successes at this time were modest. In the USSR Championship, autumn 1951, I was in the lead for a long time, but then 'collapsed' at the finish. In the spring of 1952 at Budapest I suffered a setback at the start and as a result shared fourth-fifth places with Smyslov. There were a number of interesting games, but from the practical point of view my sporting form left a lot to be desired.

August 1952 was approaching and with it the Olympiad at Helsinki where the USSR team was to take part for the first time. I was doubtful whether I should take part or not. In Olympiads the routine is very hard: five hours of play in the evening, then a night of analysis if the game is not finished, then the morning adjournment session. Then after this on the evening of the same day begin a fresh game. With such a programme I might let the team down, so I decided not to play (at later Olympiads I found that this schedule was not so bad; if you have a morning session you can be replaced by a reserve).

I suggested to Romanov that if he wanted me to I would go to Helsinki and try to persuade the Finnish players to change the schedule.

Romanov sent me to Helsinki. I spoke there with my friend Mr. Ilmakunnas (FIDE Vice-President. *Tr.*), with other Finnish organisers and then returned to Moscow. Our Finnish friends were most unwilling to change the schedule, but even greater was their desire to see the

world champion amongst the participants of the Olympiad and they changed the routine (getting rid of the morning adjournment session). News of this was sent to Moscow.

The Deputy Chairman of the Sports Committee, M. Peslyak, got the team together, told them of my trip and the difficult negotiations (he himself had been in Helsinki at the time, and took part in the talks), and thanked me warmly. The reaction was . . . total silence. This seemed strange to me, but it was all made clear two months later.

The team got together for its preparation in the "Voronovo" rest home near Moscow. Normally I did my preparation at the dacha, but I reasoned thus: it is a team tournament, and probably my comrades will take offence if I don't go. Training games were arranged. I lost the first two, but then played my way back into form. I was playing the next game with Bronstein when suddenly someone touched me on the shoulder. "You have to break off the game and go urgently to Moscow," said the Deputy Controller of the training sessions, L. Abramov.

We went to Moscow to Skatertny and sat in the reception room. First to be called in to see the Deputy Chairman Ivanov (Romanov was in Helsinki) was Keres. Then Keres came out and I was called in, accompanied by the people in charge of the training sessions and the Chess staff of the Committee. In my presence a report was made to Ivanov that everything was going well, except that the team members considered that Botvinnik was playing badly.

Ivanov posed the question to me, "Can you give a guarantee that you will take first place on top board?" "Ask Keres to come in, please," I requested. It had become clear to me that Keres had just given such a guarantee in the event of replacing me*.

After some confusion in the room it was decided to ask Keres back in. He appeared pale and embarrassed. I realised then that after this 'confrontation of witnesses' Keres would not be able to play well in Helsinki—he is psychologically unstable. Playing is not the same thing as giving guarantees!

* Keres was Soviet Champion at the time. *Tr.*

"I request that the matter be considered at a team meeting," I declared. That was where it rested for the moment.

That night I could not get to sleep. In the morning I went into the bathroom and saw Smyslov cleaning his teeth. "Vasily Vasilievich, it's reported that you consider that I do not know how to play chess?" Smyslov spent a very long time cleaning his teeth, and answered quietly, "I didn't know that it would all come out." Such a frank answer could come only from Smyslov!

Soon Ivanov arrived and the team was assembled. Keres said that Botvinnik was in poor form and that it was not possible to improve form quickly (he forgot to add that it is possible to lose one's form very quickly!). Bronstein said that if Botvinnik were to lose a pawn he would lose the game, but that if Keres lost a pawn he would somehow or other get a draw (a wise thought!). Smyslov and Kotov simply demanded that I should be removed from the team. Only Bokeslavsky stood up for the world champion. I was replaced in the team by Geller.

It was announced in Helsinki that Botvinnik was ill. Keres could not play and after three losses he had to be dropped. Kotov also did not play in the final. The team just managed to take first place.

Ten years later at a meeting with Romanov many of those who demanded my exclusion in 1952 were present. The President of the USSR Federation, V. Vinogradov, took the opportunity to declare that he still remembered with a sense of shame the events preceding our debut in the Olympiads (Vinogradov had been in charge of the training at the rest house). There followed a dumb scene, just as in the last act of 'The Government Inspector'.*

Vinogradov remained the only participant in these events that ever expressed his regret.

At the end of 1952 came the USSR Championship. The 'ill' champion who had lost the ability to play chess was fortunate enough to score 4 points against the five Helsinki team members (Kotov was not competing, Smyslov and Bokeslavsky drew with me). Yet time smoothes over every-

* The famous nineteenth-century play by Gogol in which local officials freeze with horror at the news that a genuine government inspector has come to investigate graft and mal-administration in their township. *Tr.*

thing. Already by the next Olympiad, at Amsterdam, 1954, I had good relations with the other team members.

The Championship did not produce an outright winner. In the last round my only chance to catch up with Taimanov was for Geller to win as White against the leader while I had to beat Suetin with the black pieces. During play I went over to Geller and asked, "How goes it?" His reply: "Keep working, stick at it...."

The games were adjourned in difficult positions for Taimanov and for Suetin. In the adjourned session Geller won quickly, whereas I 'mucked' it and despite Black's extra pawn the endgame was drawish. Then a miracle occurred. Suetin carelessly brought his king up to the centre, and though there were only nine pieces left on the board White's king found himself in a mating net.

So after the New Year holiday a play-off match with Taimanov. I was simply obliged to win this match—I was not pleased with Taimanov's conduct during our game in the Championship. During the game I had offered a draw, my opponent had accepted (we only needed to make the 30 moves minimum laid down in the tournament rules) and then started playing for a win. (According to the unwritten, but traditional, rules of chess etiquette only mutual agreement absolves a player from sticking to an agreement to draw.) I really had to work hard, but the match was won!

In the spring of 1953 comparative tests were scheduled for the models in the Electrical Institute.

According to its working principle our control system needed tele-measurement of the vector of tension of the receiving network. This had not been mastered by our industry (which alas is still the case), but our control system was capable of providing the best results.

In the winter of 1953 I was in the office of a senior specialist of our Ministry. There was a conversation about the forthcoming comparative tests. The occupant of the office said, "Are you aware that this work might be in line for submission for a Stalin prize?" I replied without thinking, "In that case you would be amongst those employees put forward for the prize bonus." This was fair as this comrade had taken a definite part in the work. He looked at me with a testing glance and added, "You must realise that I can be included only as being in charge on the work...."

"How can that be," I wondered to myself, "after all he isn't in charge of the work."

After the tests it was announced that the control system of our laboratory wouldn't do, as it needed telemeasurement. The system accepted was that of the Lenin Institute of Electro-technology, based on a local signal. More than twenty years have passed and the theory of forced regulation of a synchronous machine has still not been fully applied in practice.

Two years later I moved over to another, more important, problem in the field of electric machines.

CHAPTER 7.

Defending the Title

IN THE spring of 1954 came the next world championship match with the Paris rules of 1949 applying. In the FIDE qualifying events V. Smyslov was the winner.

Smyslov had come to prominence early on. At the age of 18 he was Moscow Champion, at 19—third prize winner in the Soviet Championship, at 20—a grandmaster.

He was a tall, spare, short-sighted young man with reddish hair who always acted in accordance with the advice of Koz'ma Prutkov* and 'looked at the essence'. Vasya Smyslov never had any illusions, and if he ever got distracted then it was only as 'an exception to the rule'. This is where his main strength in chess lay—he was perspicacious.

His talent was universal and exceptional. In those years he could play the opening accurately, go into defence in depth or attack fiercely, and finally could manoeuvre coldbloodedly. As for the endgame there is nothing to be said—this was his element. Sometimes he took decisions which struck one forcibly by their depth. His competitive approach was excellent, his health just what was needed for tough chess struggles. Smyslov's strength showed itself especially when he was faced with a prepared variation. Then he would sit for an hour or so at the board with his cheeks in his hands (ears red from the tension)—and find the refutation!

Unfortunately in his character Vasily Vasil'yevich (why hide it) was

* The collective pseudonym of three nineteenth-century Russian writers who issued a number of poems, tales and aphorisms incorporating down-to-earth, homely wisdom. *Tr.*

rather lazy. Possibly he valued life's joys more than its responsibilities. Yet if one does not devote oneself unceasingly to creative work then talent is not fully developed. Although in 1953–1958 Smyslov was impregnable this factor already told in his play.

During this period Smyslov achieved exceptional competitive success, but from the creative point of view he limited himself in such a way as to reduce his effort in chess to a minimum.

Smyslov would strive for calm play after the opening, preferably with a microscopic advantage. His opponent would be thinking in terms of a draw, and as is well known the way to achieve this is to exchange pieces. Yet Smyslov would help the opponent in this, himself offering exchanges but all in such a way that each exchange would give him some slight positional plus. Finally the endgame would come with a perceptible advantage. If the opponent defended successfully then it would be a draw, but if slips were made Smyslov's virtuoso mastery of the endgame would tell.

This was an almost unbeaten period in the grandmaster's career, but I repeat that his earlier games were probably more interesting from the creative side. Smyslov was at that time in the age range 32–37, the best years for a chess player. With this formidable opponent I was to play three matches.

Smyslov tried to insist that the match should start on 15th April. I refused point-blank, referring to the rules which required that the event should take place at a propitious time of year (June in Moscow can be hot). I even had to refer to the point in the rules which still applied in those days whereby if the two players cannot come to an agreement then the possibility arises of a match-tournament of four. (The four-man match-tournament is probably my most cunning invention in the 1949 rules for the regulation of world championship matches. When you study the history of these matches it is not hard to notice that the champion and challenger invariably argued about the conditions of play—sometimes over trifles!—matches were deferred for years, and sometimes even fell through. In order to induce the players to agree 'voluntarily' I thought up the four-man match-tournament: if the participants cannot come to an agreement FIDE scraps the match and organises a match-tournament of

four players—the champion and the top three from the Candidates event. This tournament was to take place irrespective of the number of players turning up for it. It is clear that the champion and challenger would find this tournament disadvantageous, so they have to give a little and not argue. In 1954 this rule still applied.)

Finally we came to an agreement to start the match on 16th March.

As in the match with Bronstein the struggle was uncompromising. At the start Smyslov had the misfortune to score only half a point out of four. But from the seventh to eleventh games I played weakly and also took only half a point in these five games! The score became 6-5 against me. The finest efforts of the first 11 games were undoubtedly the second and ninth. Then I exploited the rather hazardous play of my opponent and won four of the next five games (not a single draw in them!). Then came three fighting draws, and then (just as in the match with Bronstein) it became apparent from the 20th onwards that I had little strength left. In the last five games Smyslov pulled back two points and with a score of 7-7 in decisive games with ten draws the match ended. Once again the challenger could not master the champion and I had managed to retain my title.

In August I first had occasion to play in an Olympiad (this time nobody demanded guarantees that I would take first place on my board). The large Apollo hall was set aside in Amsterdam for the event and playing conditions were good. After a morning adjournment session I was not required to play in the evening—a reserve was included in the team. Once there was nobody to replace me, but it transpired that I had enough strength left—I won in the evening against Najdorf. The Soviet team easily took first place.

I played two very interesting games in Amsterdam. The first one was with the Bulgar Minev. I had two easy winning chances against him—in the evening and then in the morning, but went wrong twice, and finally the game was adjourned in a queen ending where I had a single extra pawn on the g-file. Ten years before this I had won such an endgame in Moscow against G. Ravinsky, but didn't really understand how this came about.

I sat at the board for a few hours (I went to bed at 3 a.m.) but, Eureka!

I found the method of winning. In the morning Minev (he had no idea of the method I had discovered) lost quickly. This was a creative victory—it had become known how to act in such endings.

A dramatic situation arose in my game with Unzicker. An opening experiment in the French Defence led to a lost position. The whole game I hung on by my finger tips. We adjourned in a rook endgame in which, according to the general opinion of experts, it was time to resign.

We had to work at it. First of all Boleslavsky helped, but soon his head started drooping and he went off to sleep. He was replaced by Flohr who put up a good show. When I woke him up he gave good advice. At 2 a.m. I sent him off to rest with the warning that at 8 a.m. he should come back and assess the results of the analysis.

Flohr turned up at 8 and found two ways to win; one of them I refuted (or so it seemed to me). On the whole this was quite good. Unzicker might not notice these finesses!

The adjournment session began. The hall was empty with only the controllers and one impatient reporter in attendance—no one had any doubts about the outcome of the game.

The first way to win was not noticed by Unzicker, but then to my horror I saw that the second way was also good enough for a win! However, here too White let slip the key point (it would seem he had had a good long sleep) and in the end the game ended in a draw.

The dinner for the players and organisers was arranged in the Carlton Hotel, the very same where in 1938 Alekhine and I had come to an agreement about our match.

These were the last years when Amsterdam still looked its old self. Euwe himself rode about on a bicycle, and as for other Dutchmen there is nothing more to say. When one reporter wanted to have a photo taken of me he insisted that I must without fail clamber up on to a bike!

We visited the girls' high school for the age range 12-20 in which Max Euwe was still teaching mathematics. It was located on a quiet canal with the whole building vinecovered.

In the winter of 1955 I played in the next USSR Championship in Moscow. There was quite a number of interesting games (I managed to win a unique opposite coloured bishop ending against Kotov) and right

up to the last round I had chances of becoming champion, but 'in the very last act' lost to Keres without a fight.

According to the constitution of FIDE the world champion is automatically a member of the Central Committee of the world ruling body. V. Ragozin* suggested that I should accompany him to the next FIDE Congress in August 1955. I was glad to agree, since I anticipated that the President Rogard was opposed to the right of a return match for the defeated champion—at the Gothenburg Congress it would be possible to clarify this question.

At the Central Committee session Rogard did not permit discussion of the question of a return match on the grounds that this could be done at the General Assembly (the cunning lawyer considered that there his position would be better able to gain support). Yet when I suggested discussing the question at the General Assembly the President indicated that there was no urgency and that all this could be included in the agenda for the 1956 Congress.

Here I took a firm line and suggested deciding the matter in principle at this Congress and explained the importance of the problem to delegates. Then Rogard had recourse to a formal vote: whether to discuss it here in Gothenburg or leave it over to the Congress in Moscow?

The result was unexpected. Rogard was supported by just one friend of his—a delegate from South America. Detailed discussion began and then the point was put to the vote: does the defeated champion have a right to a return match?

Once again his trusty South American friend stuck with Rogard whereas the whole Assembly voted against the President.

After the session Folke Rogard, white as a sheet, came over to me and asked, "Do you consider that I should resign from my post at once?"

Here too I failed to carry out my responsibilities to the chess world. Obviously I should have given an affirmative answer after which another President would have taken over and taken account of his predecessor's mistakes. Instead I reacted like a feeble intellectual, consoled Rogard,

* Vyacheslav Ragozin (1908-1962), the self-same Slava Ragozin already referred to by the author, was a Vice-President of FIDE. *Tr.*

paid him compliments and such like nonsense. He cheered up at once. What this led to will become clear from what I describe later.

So Rogard was very happy and as a memento presented me with a photograph. We are depicted sitting together smiling, while I am holding a pocket set. A third person appears on the photo, the President of the Gothenburg Chess Union (I cannot remember his name—he was the beer king of Gothenburg).

On returning to Moscow on 1st September I sat down at my writing table to try and solve a problem: what would be the result if an alternating current machine were to have on its rotor not one winding (as in the synchronous machine) but two mutually perpendicular ones? In his time Goriev had written that such a machine would be more stable in its operation. As I had been squeezed out of the problem of forced regulation this new task seemed attractive.

I worked at it for ten days, drew up a system of equations and solved the system for the steady-state operating conditions—nowadays a well-qualified specialist would do all this in half an hour. The results confirmed Goriev's predictions—such a machine in the steady-state operating conditions is indifferent to the power angle of the stator circuit and consequently can work on a transmission line of any length. The rotor of the machine can also revolve with non-synchronous speed and if the control formula is chosen correctly the observer registering the work of the machine from the stator side will consider that he is dealing with a normal synchronous machine. This formed the basis for christening such a machine of alternating current an asynchronous synchronous machine—an ASM.

In the spring the installation was ready, but great difficulties arose with the regulation scheme. What was required was a multiplication of the voltages to the value of the slip. At that time the analogue computer was in its infancy and a multiplier proved impossible in practice to obtain. I went for talks to the Director of the Institute of Control Problems, Trapeznikov. He was well disposed and gave orders to his collaborator, B. Kogan (one of the creators of our analogue computer science), to render assistance. He arrived with his first analogue computer EMU-5, entered the control law on it and the experiment ended successfully!

At that time it was decided to increase the capacity of the installation to 20 kilovolt-ampere.

However, in a year's time the next world title match was due, so it was time to return to chess.

The 1956 FIDE Congress took place in Moscow, to be followed by the Olympiad. At the Congress the basic issue was the rules for conducting world title events. A decision had to be reached on what to do with the right of a defeated title-holder to a return match. According to the rules of 1949 the ex-champion could be the third party in an event. Rogard was opposed to such a three-man match-tournament, fearing a conspiracy between two of the contestants. He also objected to a match-tournament of four—as I have already indicated the 1949 rules allowed FIDE to announce a four-man contest if the champion and challenger could not come to an agreement. Rogard was against such match-tournaments in all respects.

The President also objected to the established rules insisting that they be confirmed anew for each fresh three-year cycle.

The rules were discussed in a commission. Van Steenis (Holland), Berman (France), Dehne (BDR) supported the President and I was on my own. Admittedly agreement was reached on the maintenance of the established rules for world title matches (later it transpired that Rogard had cunningly not included this decision in the minutes of the Congress), but match-tournaments were abolished. The right of a defeated champion to a return match was maintained by laying down that this match should take place the year after his defeat.

Clearly I was too complaisant—I really should not have given way on the question of four-man match-tournaments. The situation which arose in 1972 and then again in 1975, when difficulties in negotiations between title-match contestants were artificially created by one side would have been impossible if this truly wise rule about a four-man match-tournament had still been in force.*

The Moscow Olympiad once again ended in a victory for the Soviet

* The reference, of course, is to the bitter disagreements which arose in the course of arranging the Spassky-Fischer match of 1972 and the Fischer-Karpov match of 1975 which was never played. 77.

team. Of the individual results one must note the play of the young Bent Larsen. He played so successfully on top board that the Danish team reached the final! Larsen was then awarded the grandmaster title—a new star had appeared in the chess firmament.

Unfortunately the Olympiad was not too well organised, the experience of previous Olympiads not being applied. A team tournament should be played in an exhibition hall, not on the stage of a theatre. It is impossible to demonstrate all the games; there are too many of them. The audience does not have the chance of following the game which interests them.

In 1956 the tenth anniversary of Alexander Alekhine's death fell. In October of this year a tournament devoted to the memory of the world champion was played in Moscow. From the point of view of preparation for the forthcoming match with Smyslov (who had won the Candidates event for the second time) I ought to have declined to play in this tournament and prepare for the match. Yet it was hard to turn this tournament down.

I played well and led throughout the event. By the last round I led Smyslov by a point, but at the very end, as in the 1955 USSR Championship, I lost to Keres (Paul conducted the whole game superbly from start to finish) and Smyslov caught me up.

So, my second match with Smyslov.

On the whole the match showed my inadequate preparation. I failed to show accurate opening systems, genuine art in the analysis of adjourned games and lacked competitive persistence.

I lost the first game, led 2-1 by the fifth, then from the sixth to the twelfth inclusive lost three games, so giving a 2-4 lead to Smyslov. I managed to win the thirteenth and the minimal lead (3-4) was maintained until the seventeenth game. Smyslov won this game (he played it very exactly) and the fate of the match was settled. With a score of 3-6 and 13 draws the match came to an end with the twenty-second game.

Up to the seventeenth game the fate of the match was uncertain. The decisive factors had been my slips in winning positions in the ninth and fifteenth games, but if these slips had not occurred then we would have had bare equality—no more! In the last nine games I could no longer win even a single one.

I had to decide whether I should play a return match or not. In other words did I have hopes of winning back the lost title?

Over the course of two months I carried out analytical work. This established what the reader already knows. I might add that in the period from September 1956 to April 1957 I played too many games (50). When I ceased to experience chess "hunger" I always played without any drive.

I prepared my plan of preparation, but still had hesitations over taking a final decision.

Podtserob came for me, we called in on Ragozin and Podtserob drove us up to the Lenin Hills*.

"Mikhail Moiseyevich, you simply must play the match. I have studied you, you simply can't just 'live'. If you opt out of the struggle for the world championship then you will think up something else to undertake. It's better if you just play chess."

I told my friends about the work I have done and my plans of preparation—we came to the conclusion that I should play! So I sent an official telegram to the FIDE President, and there was now no retreat.

Yet the pressure on me to opt out of the match was varied and persistent. Two arguments were advanced in favour of not playing: (1) Botvinnik should not bring disgrace upon himself, and (2) Smyslov is very strong, a worthy world champion, so why bother playing him again. After an analysis of the events of the 1957 match I naturally was of another opinion.

In the summer of 1957 a large group of sportsmen was awarded decorations. The orders were given out in the Kremlin by K. E. Voroshilov. He had a few words for each of those to receive the awards. He said to me: "You are famous throughout the world" (by my gestures and look on my face I convey that I do not agree, and have my doubts about this); "Now you have lost (I bowed my head), but there is no reason to be distressed. You lost to a remarkable 'fellow'" (at this point my face expressed disagreement).

* Lenin Hills, formerly the Sparrow Hills, to the south of Moscow, where there has been much building recently, including the large new complex of Moscow State University. *Tt*.

Kliment Yefremovich fell silent, and seeing that I did not concur with him, added in a conciliatory and friendly fashion, "But possibly you will win again?" "Possibly," was my swift reply. Several of the staff of the Praesidium of the Supreme Soviet who were standing behind Voroshilov laughed in unison.

Soon Golombek* sent his book of the match from London.

In addition to the games it had a preface written by the winner and a postscript by the ex-champion. When I read the preface I came to believe in my success. "The hard struggle... for the great world title is at an end, and new encounters, new tournaments and matches are to come," wrote the new champion.

Possibly he is too confident? Conceit does not put one in the right frame of mind for work. My decision was that I needed to work well and then I could reckon on victory.

In the summer of 1957 it became known that the members of the Olympiad side had permission to purchase a 'Pobeda' car with priority on the waiting list. I was doubtful for a long time. My eyesight had got worse, and I could no longer sit at the wheel, but two days before the privilege ran out I bought one (the colour of coffee with milk). At the same time I managed to come to an agreement with I. Kabanov (the official car driver of our friend the Deputy Minister of Electrical Power Stations) and the whole family set off for a 'trial run' to Leningrad. As far as Novgorod all went well, but from there on the direct route to Leningrad was closed for roadworks and we had to take a circuitous route via Pskov and Luga. I knew these parts, and I had also been in Novgorod and Luga. We consulted together with Kabanov and decided to strike our way through direct to Luga on a country road.

The road was terrible and we couldn't go at more than 20 kilometres an hour. Finally we got to Luga, and then arrived at Leningrad at three in the morning. After some prophylaxis (*en route* we almost 'lost' the generator—it was hanging on by one bolt) and rest we returned to Nikolina Gora this time via Pskov.

* Harry Golombek, *The Times* correspondent, had been present at the match as an arbiter. *Tt*.

Ivan Matveyevich Kabanov was working and naturally could not drive our Pobeda. He advised us to apply to P. Ryzhov. Pyotr Tikhonovich Ryzhov was already retired from his work as a Ministry driver. He was a short man, upright, grey hair, but no baldness, a contemplative person whose experience as a driver stretched back right to the First World War. He was glad to agree. He loved the car and always said in advance what maintenance should be carried out. Up to the first 10,000 kilometres he did not race the engine, and took corners carefully to go easy on the tyres. At traffic lights he looked at the cross traffic and paid most attention to possible hazards. His explanation was, "If you break the traffic laws it is not such a big thing, but if you have a crash. . . ."

He spent the whole of the First World War at the front as a despatch rider. "Do you know what an urgent despatch is—pace, three stars? If you don't get it there in time you're shot." One winter at the front he decided to take a rest, left his motor bike on the road and fell asleep. Passing soldiers caught sight of his bike, took his body stiff with cold to the nearest village. He drank a bucket of tea and came to life again.

During the Civil War he was a commissar and then commanded a mechanised company. He had adventures there too. He would tell of how, during the Polish campaign, he had to do a bunk (while not fully dressed) through a cottage window. A Pole shot at him as he was getting out, but, praise the Lord, missed him.

We became friends with Pyotr Tikhonovich.

In the summer of 1957 we took a puppy from our neighbours—the father was a German sheepdog, but a rather cowardly one, the mother, Freda, a mongrel mixture, but clever. Freda regularly called in on us to feed little Volchok. Volchok grew up and Ryzhkov's favourite occupation was to go racing along with him.

It was with Pyotr Tikhonovich that I prepared for the return match and with him that I played the match!

My openings were duly worked out. One had to play with very great care against Smyslov especially with Black, and when analysing spare no efforts and miss no chance of victory. I had prepared a surprise for Smyslov—the Caro-Kann Defence, Capablanca's favourite weapon.

The effect was shattering: Smyslov lost the first 3 games, 2 of them as

White against the Caro-Kann. We played another 20 games which gave an overall victory to him (10½–9½), but what use was that?

The fourth game was adjourned in a lost endgame with opposite-coloured bishops. Ryzhov and I went to the dacha—he to rest, while I had to analyse. In the morning my temperature rose, but there was no point in getting a doctor's note, since the position was lost any way, and one could miss a session for illness reasons only three times. Smyslov did not measure up to the position and as a result it ended in a draw.

While I was playing my adjourned games Ryzhov normally waited for me surrounded by a crowd of chess fans. "What does Botvinnik reckon, how will the game end?" I had no secrets from my chauffeur, he was a person of firm principles, and met all these questions by a shrug of the shoulders. Once I came out after an adjournment session, and somehow the car had disappeared from view. It turned out that it was surrounded by fans who were 'interviewing' the driver, while he was sat at the wheel locked inside.

"Pyotr Tikhonovich, why are the doors locked?"

"You know how they press forward, they might crush you, or even turn the car over."

The outcome of the return match was decided, but I did not hit upon the correct approach straight away. Only after I had lost the fifth game (where I overlooked a mating possibility in the endgame) and won back a point in the sixth did I realise that I ought to play exceptionally carefully for a draw. It was up to my opponent to win back lost ground—he would be bound to lose his self-control and would start to 'slip up'. In that case I had to avoid blunders. With such a formidable opponent as the Smyslov of 1958 this was the only possible tactics.

Up to the fourteenth game I retained my 3-point advantage. Smyslov lost this game and adjourned the fifteenth in a lost position. I could be 5 points up! Yet 'a miracle' happened. This time I was careless in my analysis and on top of that I forgot about the clock while at the board and lost on time. Two moves before the time control queens were exchanged and I got a quiet endgame in which I had an obvious advantage. In my subconscious this was associated with the impression that the con-

trol was already past—such a state of affairs tends to apply to a player after he made his control move.

My second G. Goldberg and the arbiter G. Stahlberg were greatly concerned when they anticipated the loss on time, but what could they do? They did not have the right to interfere in the course of play. From the following match onwards Stahlberg brought in a rule giving the arbiter the right to indicate to the player (just once!) that the control move has not yet been made!

(Yet my basic mistake consisted of not going to the dacha in order to analyse. After a night's analysis at the dacha your main concern is to get the engine started. Ryzhkov would sit at the wheel and press the starter, while I used the starting handle—the nights were still cold. You turn the starting handle for several minutes, all covered in sweat, your only thought is to hold the handle properly so that you don't get a finger taken off. Finally it starts up. Your head which had been heavy after a night's analysis becomes clear. Now you can go to the adjournment. If I had analysed the fifteenth game at the dacha everything would have been different.)

So once again my advantage was only 3 points. We were both tired and inexplicable errors started to appear in the games. Smyslov was less tired and managed to win back 1 point.

My opponent was nervous during the match. For example, he demanded the right to miss play through illness on a fourth occasion, and the arbiter Stahlberg had to apply to the President for clarification. Once Smyslov failed to turn up for an adjourned session (when he had a lost position) and he also failed to turn up for the closing of the match—a unique occurrence in the history of chess.

Smyslov's defeat had an underlying psychological cause—he had under-estimated his experienced opponent.

In the autumn came the next Olympiad at Munich. We played in an ancient hall, very pretty, but dark. Because of my shortsightedness I did not play, but rather suffered. When I lost to the Austrian Duckstein I demanded from the Director of the Olympiad Herr Schneider (later he became President of the BRD Chess Union) a table lamp. He brought a lamp from his house in Nuremberg and I came to life. My team colleagues

were ironic about my 'excessive' demands, but when the lamp appeared I noticed that a Soviet player (on the next board to me) quietly tried to move it nearer to his board.

My fate is a strange thing. When Fischer demands unnaturally strong lighting for the whole room (there is certainly some eccentricity hidden here) specialist electricians check the illumination, and everyone is in raptures over a champion who fights for his rights to good creative conditions. Whereas my modest and natural requests are laughed at.

In Munich too the Soviet team won the gold medals.

There was an unpleasant incident at the Olympiad. As is well known Reshevsky does not play on Saturdays on religious grounds. The Americans requested that I should not turn out in the USSR-USA match ('to even things up'). I refused point-blank despite the pressure on me from the head of our delegation D. Postnikov and the captain A. Kotov. They claimed to be afraid of the American threat that they would cease play in the Olympiad and return home. When we were arguing it out (this was in the foyer of the Metropol Hotel) the President of the West German chess players, E. Dehne, was sitting nearby.

"Why are you frightened that the Americans will leave? This is what Dehne must be frightened of, consult with him!" I said to my superiors.

"If the Americans want to leave, then let them," said the German in a calm fashion. Obviously I played in the match against the USA!

When we walked round Munich it was not an uncommon thing for us to be stopped by passers-by when they heard Russian spoken. "You're from Moscow? I was in Russia as a prisoner of war. Do you happen to know Major Ivanov? He was in charge of our camp."

The cook at the hotel gave us notice that he was preparing a 'Russian' meal. We were served a very fine borsch with a large portion of boiled meat. Everyone was full-up, but out of habit sat there waiting for the second course—there was none. This was the way the prisoners of war were fed!

A year earlier a delegation from German engineering firms had been in Moscow. Herr Knopp, one of the directors of the firm Siemens-Schukkert, invited me to Erlangen to appear before the Siemens chess club. We agreed that I would go there after the Olympiad.

In the middle of the Olympiad Herr Knopp appeared and we agreed the date for me to give a simultaneous exhibition. "What fee?" "I won't take one from colleagues."

Later on Flohr (who was in Erlangen with me) informed me that Knopp had prepared a 'small' radio for me. Well, we struggled away with it on the plane. I was returning to Moscow via Holland (Flohr and I were giving simulms^{*} there). It was a good thing that an Embassy councillor was travelling to Moscow from The Hague by train and could take it off our hands for the journey. The weight of the small radio was over 10 kilos, and as for the dimensions... (it also included a record-player).

In Erlangen I was shown the chemical laboratory where they developed the technology of producing silicon with a rigorously predetermined composition of admixtures—in this case one can get a silicon with predetermined characteristics for transistorised instruments. At that time I understood nothing about it. I only understood some years later when I came up against this problem in my work and appreciated the firm's successes in this respect.

This was the first time that I had made a tour through Holland. Many people are interested in chess in Holland—workers and farm-hands, clergy and schoolchildren, bankers and professors. It is always pleasant to appear before such a mass audience. I also had occasion to take part in a television programme devoted to the role of computers (I was invited by Euwe). Before the show I was shaved, had make-up put on and brought to the hall. There were mathematicians and chess players present, poets and psychologists—representatives of many specialities. (If I'm not mistaken there was also the famous de Groot, author of the large book on the thinking of chess players; all cybernetics experts make reference to his work.*) I was introduced to a young poet. "Have you read Mayakovsky?" I asked. "Yes, of course, but I am very fond of Khlebnikov."

This startled me. In the Soviet Union we hardly know Khlebnikov, yet he is popular in Holland. Truly a prophet goes unrecognised in his own country!

Then came my turn to take part in the discussion. Euwe posed me the question "Will a computer in the future be able to play chess well?"

"Yes", was my reply without any long thought. At that time the reply was dictated by intuition. Later on I began to consider the matter seriously, but never imagined that thereafter I would have to devote so many years of my life to the creation of an artificial chess player.

Naturally I was sorry to say goodbye to Holland, a unique, neat, as it were toy-like, country of hard-working people, but it was time to go home!

* The work in question is *Thought and Choice in Chess* by A. D. de Groot, published by Mouton, The Hague/Paris, 1965 (2nd edition). Tr.

CHAPTER 8.

The Controlled Machine

IN 1958 there was a conference in Moscow. The discussion was about the project for generators for a hydro-electric power station on the Kolsky peninsula—should AS-generators be installed? The majority considered that the development work was not yet sufficiently advanced, and it was decided to send a representative to the Leningrad Council of National Economy (the machines were to be produced by the 'Electrosila' factory) to give a negative recommendation.

The engineer Sazonova came back from Leningrad with a positive decision! It turned out that the conference in Leningrad was headed by one of the greatest specialists on electrical machines, P. Ipatov, and the idea appealed to him. In what followed Pavel Mikhailovich Ipatov helped in completing the work at the power station.

It was necessary to make urgently a new model installation with two machines (at a hydro-electric power station two generators have to be installed) for working out the control system.

On 6th May 1959 two model AS-generators were brought into joint exploitation through the transmission line to the grid. The experiment concluded successfully. Once again there was a conference: where should the orders be placed for the control system?

Just as in 1953 when our laboratory was excluded from the work on forced regulation, so too in 1959 our Institute (the former laboratory had been reorganised into an institute) was excluded from the work on the new hydro-electric station. The orders for the control system were assigned to the Lenin all-Union Electrical Technology Institute (the reg-

ulator) and to 'Uralslektroapparat' (the executive agency—an ionic frequency converter).

The same mistake had been made as in 1953. The people excluded from the work were the authors who had been involved in the whole problem as a unit. They were the ones who could have anticipated possible slip-ups.

Unfortunately when everything had been assembled it turned out that there was no constituent part in the unit which was error-free from the point of view of combined work of the parts. The whole equipment, to put it delicately, had to be modernised—the system as a whole proved unworkable. Once again our Institute was brought into the role of overseer of the problem. It is a good thing that two variants of generator were envisaged in the project—a synchronous and an asynchronous. When the asynchronous was impracticable for many years the station was run on the synchronous variant.

At that time I wrote the brochure *An Asynchronised Synchronous Machine* which the State Energy Publishing House brought out in 1960. The basic ideas laid down there apply still nowadays. In 1964 the book was published in Oxford, England, by Pergamon Press*.

Another new collaborator with me appeared—Yu. Shakaryan. He came to us from Yerevan and started postgraduate work. The theme of his dissertation was the AS-motor. This work had considerable practical consequences. Shakaryan, along with other researchers, suggested including in the regulator for AS-motors a small analogue computer for real-time calculation of all the trigonometrical operations necessary for the exit control signal. This idea was later successfully applied.

To replace Smyslov a fresh opponent appeared—Mikhail Tal.

Nowadays much has been forgotten about that time. It seems to me that the Tal of 1959–1960 was no less popular amongst chess players than Fischer in 1970–1972. I stress, amongst chess players. Amongst the non-chess public Tal with his indifference to money cannot compare to Fischer whose name is involuntarily associated with millions of dollars.

* The English edition *Asynchronised Synchronous Machines* is now out of print but available from Pergamon Press in a copyflow edition—Ed.

Legends were current about Tal: he hypnotised his opponents (the whole world press carried the photograph of Benko fruitlessly trying to save himself from the hypnosis by the use of dark glasses); he himself did not know how he overpowered his opponents' will to resist; his unjustified, more than risky, sacrifices were pronounced to be the revelation of some new path or other in the art of chess. You can't count all the claims.

The demonic Mephistophelean expression on the face of the young Misha Tal obviously encouraged all these tales, and his demonstrative disregard for the well-known norms of a competitive régime confirmed still further idle conjectures about the magical nature of the strength of the young man from Riga. Yet all this was, of course, just tales and embellishments. What did the real basis of his playing strength consist of?

From the point of view of cybernetics and computer science Mikhail Tal is an apparatus for data processing, an apparatus possessing a larger memory bank and a swifter reaction than those of other grandmasters. In those cases when the pieces have great mobility on the board, then this has decisive importance. Tal was not very interested in how to assess objectively the position that he was striving for. It might even be that he stood objectively worse there, yet if only his pieces were mobile then the analytical tree* of variations is so extensive, so great is the number of moves in this tree, that the opponent cannot cope with them and Tal's swift reaction and memory tell. That is the whole basis of the unusual, fantastic play of Tal. It is based on perfectly prosaic factors.

Since this method of play led to practical success there was no point in Tal occupying himself with tense effort in an attempt to make his play more varied. He played as it was advantageous for him to play; he got used to such play. This was fine while his play was not understood;

* Analytical tree. This term, from computer science, is used frequently by the author in the rest of the book. The analogy is of a tree growing upwards into many branches. The first move to be considered is the broad trunk. The next move in that variation (of which there may be several possibilities) forms the next highest branch, and so on upwards with an ever-increasing number of possibilities the further one moves away from a given initial position. Compare with the idea of a family (genealogical) tree. A family tree grows downwards from a chosen set of relatives or parents. 77.

it could rebound on him unpleasantly if someone were to discover the secret of his successes and exploit the minuses of his one-sided approach to chess.

One can guess what sort of atmosphere our match took place in. On the one side an ageing champion (whom everyone had already grown tired of), on the other a young striking player, the darling of the crowd. All the journalists were for Tal—the Latvian was pleased to give interviews and write articles; the old champion on the other hand shunned the journalistic fraternity.

By that time everybody was pretty fed up with me, most of all my fellow grandmasters. Just how much time can one occupy the throne of chess? The times of Lasker, Capablanca and Alkheine were gone. The three of them together had ruled the kingdom of chess for half a century all told. Nowadays this was impossible, the champion was surrounded by a vanguard of grandmasters of different generations (all of them younger than the champion), and each of these successful warriors thirsted to become the king of chess. The task was to finally drag down the world champion from his pedestal, and then the grandmasters would somehow settle the matter between themselves.

The return match with Smyslov had caused great alarm amongst them. Smyslov had won the 1957 match, won in fine style; yet what had happened just a year later? So the grandmasters set to work, unnoticed, stealthily. The bomb exploded at the 1959 FIDE Congress in Luxembourg. The President Rogard (the reader has probably not forgotten the events of four years earlier at the Gothenburg Congress) was well suited by the mood amongst the grandmasters with regard to the right of the need for a return match. So Rogard resolved upon a deed that fitted in badly with the strict rules of procedure that were normal for him. He 'unexpectedly' raised the question of abolishing the return match, and the General Assembly duly abolished it.

I got to know about this after the event. Of course this decision was directed against the creative principle in chess. A return match potentially defended the chess world against a champion who possibly might not merit the title. Chess needs a stable, genuine, champion. How can this be safeguarded without a return match if the champion (as envisaged in

the rules) can lose his title merely because he falls seriously ill during a match?

'The anti-Botvinnik rule' was how the British magazine *Chess* described this decision, yet I was personally glad of it. How many decades can one live in a state of tension? So I did not protest at the abolition of the right to a return match.

Having gone against procedure and not having given notice of the inclusion of this point on the Congress agenda Rogard nevertheless did not change the rules already laid down for the three-year cycle 1958-1960, and for this period the right to a return was retained.

The world title match began in the spring of 1960. Tal made extensive use of his excellent practical qualities. He kept forcing me to seal a move (the Bronstein method), made clever use of my regular time trouble, but most of all at as small a positional cost as possible he went for active and mobile pieces. If he was successful at this, I was helpless. I was startled that my opponent instead of playing 'according to the position' (as I had been taught in my youth) made what appeared to be illogical moves. The logic was a purely practical one—to pose the opponent hard problems. Let us give Tal his due. When his opponent made mistakes Tal found elegant and original solutions.

In essence I managed to win only one game well (the ninth) and overall only two! Although Tal's lead after this game was only minimal, yet in what followed my opponent either dominated or I failed to make use of the chances that presented themselves. Tal deservedly won, and in this match he was clearly stronger than his opponent.

The closing ceremony was conducted by FIDE Vice-President Marcel Berman (France)—Rogard had never visited the USSR after 1956. Berman was already incurably ill. Three months later he was dead. He probably had guessed that he was doomed. In such circumstances one can believe in his sincerity. Berman rendered me my due, not only as a player, but as a sportsman. This was very touching. We had got to know each other at the 1949 Congress when I gave a simul' against the strongest players of Paris and as a mark of gratitude Berman gave me for my wife a large bottle of perfume of such size that I have never seen the like, before or since!

So for the second and last time I had the right to a return match. Should I make use of it?

After the match (as in 1958) all the games were thoroughly analysed. I marvelled at my weak play. When you go through games without taking account of time trouble, the heat of the battle and other special features of a chess contest everything appears in a different light. So I resolved to play, working in two directions: (1) to learn from Tal how to be a good, cunning practitioner, and (2) to prepare the sort of openings and middle game plans associated with them in which the struggle is of a closed nature, the board is split into separate sections, the pieces not too mobile. Never mind if objectively my position is worse in that case, at least my opponent will not be able to exploit his swift reaction and memory (and my understanding of chess positions will tell). However, before the return match there was another event—the World Chess Olympiad in Leipzig.

We played in the building of the Leipzig Trade Fair. It was a long, narrow building; inconvenient when a game attracts a lot of attention; convenient if the players do not want to attract the attention of the spectators. Thank goodness I came into the second category, yet I did play two good games—White against Schmid (BRD) and Black against Neikirch (Bulgaria). The first category obviously included both Tal and Fischer. When they met it was a real rugby scrum!

The DDR Chess Union ran the Olympiad in excellent style.

The players were treated very well. On a rest day the government arranged a superb banquet in a local theatre. The tables of the Soviet and American teams were side by side. We drank together, made merry together and set off together back to our hotel, the 'Astoria'. That experienced journalist Flohr naturally walked alongside the young Fischer.

"Bobby, do you intend to get married?"

"Yes," replied Fischer slightly tight, "I'm thinking of buying myself a wife pretty soon."

"Buying?"

"Yes, buying. They tell me you can buy a reasonable wife in the East for 200 dollars, and well, for 400 dollars, you get a first-class one...." That was Bobby at the age of 17!

During the Leipzig Olympiad David Oistrakh was making a tour and naturally came to watch the play. Oistrakh was a first-category player, played cautiously and had a reasonable technique. In 1937 he won a match against S. Prokofiev. Their match took place in the Central House of Art Workers and was announced on many posters in Moscow. I had been friends with Oistrakh since 1936, but we had never met abroad before. When we are abroad we normally have the closest relations with compatriots, and when I had a meal with David Oistrakh I realised what trust he had in me.

The Olympiad once again had finished with a victory for the Soviet team. As always the Soviet grandmasters were due to give simultaneous exhibitions.

Our captain L. Ahramov came up to me, "Herr Grez asks very insistently that you should give a lecture in the Humboldt University in Berlin" (Grez was the director of the Olympiad).

"On what subject?"

"On computer play in chess."

"I can't; it's a topic demanding considerable preparation."

"What do you mean, Grez says it will only take up about twenty minutes."

I was so incautious as to give my assent. However, when I arrived in Berlin it turned out that I had to present a written contribution which would be translated into German. I only had to say out loud the first sentence (and, after the German translation of the lecture had been read) the last. There was no retreat. In the morning I sat down at my table, and by evening the lecture was ready. The next day the translator came, took my lecture, and said that I would be called for at a certain time. I waited, no one came; I went out into the street, and stood by the entrance. Nobody was there. I went back up to my room; the translator phoned: "I've only just finished the translation, it was very hard. They called in for you, but couldn't find you. We are already starting; they are coming for you again." It turned out that the students did not know what I looked like, and we had passed each other by!

I came into the lecture theatre, but of course I was late for the first sentence. The lecture was in full swing. I managed to speak the last sentence.

This was an important day. In the two years that had gone by since the TV programme in Hilversum when I had answered "Yes" to Euwe's question a great deal of thought had been put into it. This was systematised in the lecture. From the "Yes" to the "last sentence" stretched a very long journey!

A month later the lecture was published in shortened form in *Kommunistische Pravda* under the title "Men and Machines at the Chess Board", and later on it was reprinted in many editions both in the USSR and abroad (the full version was published in the magazine *Shakhmaty v SSSR*). Several years later (when work on the algorithm of chess play was already significantly advanced) I had to edit this article. I was concerned; was what I had written in 1960 nonsense?

I read it through and was thoroughly pleased—it was all accurate. Yet it could not have been otherwise; the lecture was sincerely written, I was analysing my chess 'self'. There was no reason to be ashamed!

So, the spring of 1961; the return match. All the conditions were agreed (Tal had wanted to start in April, a month later, but gave way), the date for the first game was already set, but...

Romanov summoned me and with a friendly smile said,

"There's nothing to be done about it, we have to defer the match. Tal is ill."

"What is the source of your information?"

"They've phoned up from Riga."

"What have phone calls got to do with it? Is there a certificate from the official doctor?"

"What certificate? What sort of formalism is this? He phoned me himself..."

"Then shame on him who phoned you. The rules apply to everybody!"

"What rules?"

That is it word for word. The two of us flared up, and shouting began. Of course neither one heard the other, I think, and were not really conscious of what we were shouting. I can remember well that when I was leaving I turned round in the doorway and bawled out, "My feet will never step into this office again." There were many people waiting in the

reception room for a meeting with the Chairman. They all stared at me in bewilderment.

"Well," I thought, "I shall not play chess any more."

That evening I was phoned from the organising committee of the match: "The return match will begin as scheduled."

As soon as I had left, Romanov had sought information about the rules—he did not know them. Having discovered that my demand for a doctor's certificate was correct he gave an order that by evening a report should be ready on the illness. When he was told at a reception that evening by Postnikov that Tal refused to be examined and so refused a doctor's report Romanov calmly stated: "Start the match according to the regulations."

There is a Chairman! He was fair.

So the return match started. My only concern was to maintain the closed nature of the position and not to lag behind my opponent in competitive pragmatism. At first I did not always manage to achieve this, and although the match went well for me there was no special advantage. After the eighth game the score was 3-2 with three draws. But then Tal did not cope with the tension; he needed not just to win, but to win in style! I won three games in a row, the score became 6-2. This was a 'signal' already. After the fifteenth game I was already 5 points up—the same size of lead I could have had in the 1958 return match if it had not been for the ill-fated adjournment of that unhappy fifteenth game.

At the finish I felt the fatigue and my opponent perked up—in the last six games the score was even. Tal was putting the pressure on (one can only envy his fighting qualities!) but after the twentieth game he was broken.

We adjourned this game in a difficult position for me—a sleepless night followed. In the adjournment session it became clear that White had missed a winning line in his analysis, but I was not too clever either—I mixed up the variations I had prepared at home and once again came into a lost endgame.

At the end of the adjournment session I had the feeling that Tal was playing uncertainly, but the general opinion was that the adjourned

position was hopeless for Black. A second sleepless night, and by morning the most obvious and the main threat had been neutralised by an unexpected stalemate possibility. Less active play by White would leave Black some hopes of a draw.

I sat there and thought: how can I let it be known in the enemy camp that it is really hopeless for me? Then they will not work hard at it, and it is possible that they will overlook the stalemate. Should I phone somebody up? No, out of the question, that is pretty flagrant. I would have to wait till somebody phoned me for the message to get across by roundabout ways.

Aha, a phone call from Yasha Rokhlin, who has links with all the journalists, that's fine. "Well, Misha, are you working at it?" I gave a deep sigh, "Yasha, you yourself must realise how it stands . . ."

Yet another ring—Salo Flohr, even better. He is friendly with Koblenca, Tal's second. Possibly he's checking up on Rokhlin? I kept quiet and then in a broken voice said, "I shan't say anything to you, Salomon, I'm very tired." I had to act very carefully here—Flohr is experienced and clever.

After two days of play and two sleepless nights I was thoroughly tired out, yet I did not take my usual thermos flask of coffee with me to the adjournment session—this would be the most weighty proof that I would make just a few moves and then resign the game. It was during just these few moves that Tal had to miss the stalemate.

Later on Tal denied that he noticed the absence of the thermos flask; possibly, possibly. . . . Yet he could not have failed to notice my general mood of hopelessness.

Normally I do not have recourse to such tricks, but I could well remember what had happened in our first match, and considered that a debt repaid was a debt well made.

Do I need to add that Tal saw the stalemate possibility too late and the game ended in a draw? (See Game 8.) The next day the return match ended too.

I had won with a plus score of 5 points in 21 games—nobody called me a genius (thank goodness!). It is curious that when eleven years later Fischer won the title by a lesser margin he was pronounced a genius. There is scope for reflection there. I feel that if Fischer were representing

not the USA but, let us say, Denmark or Poland, he would not be considered a genius.

Yet the success of a middle-aged player did strike many people forcibly. The local Party Committee assigned me a place for my Pobeda car in a good garage—my friends congratulated me and joked that this was harder to get than winning the world championship.* At the end of August I was awarded the order of the Working Red Banner—to mark my fiftieth birthday.

The President of the Praesidium of the USSR Supreme Soviet, L. I. Brezhnev, presented the orders at the beginning of September. There were six awardees in all—five people celebrating jubilees, and a young lieutenant. When the official part of the ceremony was over Leonid Ilyich Brezhnev said to me: "I was rooting for you, and my son—for Tal." Then the traditional photograph for which three chairs were set out, with the President sitting in the middle. To the right sat the artist Gerasimov, but to the left of Leonid Ilyich the place was vacant.

I could not make up my mind. On the one hand to sit next to the President was a great honour, yet on the other hand there was present Igor Vladimirovich Ilyinsky, the idol of my youth. During the war we had met in Solikamsk (I was checking the high-voltage insulation, he was giving concerts) and had had friendly conversations.

"Igor Vladimirovich," I said, "you are ten years older. Possibly you want to sit down?"

The Vyborg Commercial College showed up in me and I decided to demonstrate my good upbringing confident that Ilyinsky would reciprocate. However, Ilyinsky immediately sat down without further thought!

Now I could take a rest from chess. However, a year earlier Keres had been a guest at my dacha. He saw how we struggled with the coal and shrugged his shoulders, "It's time to go over to automatic oil-fired heating. That is the way I've warmed my house in Tallin for quite some time. You will have a quiet life, and the results of your creative work will be better!"

* Private cars are a rarity in the USSR, and after Khrushchev saw the rush hour and smog of California he came out strongly against the extension of private motoring in the USSR. *Tr.*

After the return match the European Team Championship was scheduled for the BRD. Tired as I was I still went to Oberhausen—in order to buy an oil fuel injector for the boiler.

In the last round of the first half I lost to Unzicker (BRD) and got my own back in the second half. Even before the event started Keres was negotiating for a reduction from a certain firm (I had little money), but it seems that the last round spoiled everything.

During the event I noticed that all the grandmasters suddenly turned away from me, as in 1952. I couldn't understand what was up?

As always I went to the railway station to buy Soviet newspapers. Ah, that was what was wrong. *Izvestia* had published my article 'Analysis or Improvisation' in which I had related the story of the adjournment of the twentieth game of the match with Tal, that is of how I had refuted the forecas of all the journalists (the papers' correspondents at the time of the match were the very same grandmasters who were now playing in the team! Well, never mind, they will become reconciled in time.)

After the European Championship the Soviet grandmasters made appearances throughout the BRD. I gave a simultaneous in the small mining town of Herten—a very clean place, all around was greenery. There was a new town hall, and on the second floor a library where there were Russian books, even modern political ones.

I went with Geller to Cologne to appear in the chess club of the 'Nordstern' insurance company. They had around a thousand employees of whom one in ten was a chess player. At the entrance we were met by a gentleman in a dark suit. "Yefim Petrovich," I said to Geller, "isn't this the Director?" "What do you mean," he replied uncertainly, "would he really come to greet us?" We went upstairs to be greeted there in courteous fashion by a gentleman in a coat with tails. "The Managing Director," whispered Geller to me. I shook my head to indicate disagreement.

Soon a meal began. I turned out to be right. Down below we had been met by the director, upstairs by the waiter!

At table I got by somehow with my knowledge of German, but when we went to the next room where there was some TV shooting and then an interview with the local paper (the clever director had decided to use

our appearance for advertising his company) I had to cry out for help. The newspaper editor Herr Zawadski (who categorically denied any relationship with Yu. A. Zavadsky*) started posing me questions on philosophical themes and my German proved not up to this. Then they summoned an employee of the company who knew Russian (Herr Orlov who found himself in Germany during the war. At first his behaviour was tense, but then he 'opened up' and even gave me to understand that he was pining for his native land.) Zawadski was interested in everything; for example, what had become of the three authors of the work on the intellectual capabilities of the participants of the 1925 Moscow international tournament (the book had come out in German as well as Russian). On one of them I could provide some information. P. A. Rudik was in charge of the Psychology Faculty of the Physkultura Institute and lived at Nikolina Gora. The next day the newspaper carried an extensive article by its editor.

Early next morning the insurance company took Geller and myself to Dusseldorf airport, and then all the team flew back together to Moscow.

At the end of December 1961 Flohr and I travelled to the Hastings Christmas tournament; I hadn't been there for twenty-seven years! This time I rehabilitated myself by making a draw with Flohr and another one (in 100 moves!) with Gligoric. It was pleasant to live just by the sea; we walked about a lot to the accompaniment of the seagulls' cries. When the wind was from the south there was a tasty smell of the ocean.

The English had a cordial attitude to us, but once the Congress Director, Frank Rhoden, almost transgressed the traditional hospitality. He met us on the sea front (Rhoden, a school teacher, was a hale dark-haired fellow, who only put on gloves when he went outside). "Well, today you will be getting your prizes," he said, looking down at me from his tall height, and slapping me on the shoulder. Then, however, he noticed the unfortunate impression which his words had produced (was it really just for money that we had come so far?) and added, "Do you want to know what money is?"

* A well-known Soviet actor and theatrical producer. 77.

Then Rhoden symbolically blew his nose through three fingers; good relations were straight away re-established. He led us into a bar on the pretext that I had a head cold. Rhoden used to cure himself with the help of whisky even when he was well, but the whisky had no effect on my chill.

From there we went to Sweden where we gave simul's and took part in a small tournament (this time I had a draw only with Flohr). For first prize I received a transistor radio-cum-alarm clock. At night it suddenly switched itself on and woke me up. The following day we appeared at Norrköping where the Philips factory is located (this was where the radio had been made).

We were shown round the factory by a chess player. He knew all the employees, said hello to each of them, knew what wages each one received, knew the production technology. "Who is he, the chief engineer?" I asked the President of the local chess club. "What do you mean?" came the answer, "he's the head of the personnel department." Yes, I thought.

The radio was checked, but, oh horrors, it woke me up once again. Then I was forced to look into transistor technology: in two hours the alarm clock was put right.

In Stockholm I purchased a fuel injector for my dacha. An old friend Mr. Björstom (President of the Stockholm Chess Union and a wholesale grocer who also provisioned the Soviet Embassy there) took me to the firm 'Atomik'. In the yellow pages we found scores of firms who sold such injectors and this firm was chosen since it boasted that all the parts were made in Sweden.

The proprietor of this small firm, engineer Huine, quickly came to an agreement with Björstom—a 20 per cent discount.

"Will it work reliably?" I asked.

"We will give you for Moscow an absolutely reliable system." (It would be impossible to carry out maintenance at such a distance.) Mr Huine did not let me down, the injector is now working through its fifteenth season. Unfortunately only the mounting proved to be Swedish workmanship, all the rest was American and English. Yes, and thanks to Paul for his advice!

The next Olympiad, 1962, Golden Sands (Bulgaria). The composition of the team was being discussed (at that time I was involved in the work of the Soviet Chess Federation). There was a suggestion that Mikhail Tal should not be included. Why?

"Tal has poor health."

Shades of 1952 all over again!

"Excuse me," I said, "but is this a session of the Chess Federation, or a medical commission?"

After some wrangling the motion was finally moved: put Tal in, but ask him for a certificate about the state of his health.

"No, pardon me. The question being decided does not concern Tal alone. We are picking the whole team, and all the team ought to have a doctor's report on them." Tal, of course, went to Bulgaria.

It was nice to play in hospitable Bulgaria, but dangerous. The sea is marvellous, tempting one to swim. Once I could not resist and went swimming to my heart's content. I then played the first half of my game with Uhlmann artistically, with élan; in the second half I understood nothing of what was going on, and Uhlmann took me with his bare hands. That is what it means not to stick to your régime!

For the first and last time I met R. Fischer at the chess board. He played the Grunfeld Defence (Smyslov variation) as Black. Here I had a certain line prepared from long ago which would put Black in a difficult position. I had to call to mind all the tactical finesses—Fischer reacted in accordance with my analysis, but suddenly a surprise: on the seventeenth move Fischer by an apparent queen sacrifice, won a pawn—something I had overlooked in the analysis!

In essence the assessment of the position remained unchanged. White could still keep the advantage, but the oversight discouraged me and I quickly got a lost endgame a pawn down. On move 38 Fischer in his haste made a superficial move—this put me on the *quid vobis*. We reached the time control but Fischer carried on playing (he had time in reserve) and by all his demeanour indicated his dissatisfaction at my failure to resign. Finally the American sealed his forty-fifth move in a rook ending in which Geller, some time after midnight, suggested to me a remarkable idea for counter-play. During the night I developed this quite well and

just in case prepared a cunning trap; what if my arrogant opponent should fail to spot this finesse?

Fischer spent the night asleep and in the adjournment session fell into the pitfall—there were tears in the young man's eyes. I went up to our captain L. Abramov to reassure him: a draw. Fischer dashed to the judge Lilian Bonevoi and made his protest: look, they're suggesting moves to Botvinnik. When the game ended Fischer nevertheless shook hands and then left the hall as white as a sheet.

After this meeting with Fischer in the autumn of 1962 I published a detailed analysis of this rook ending in which I showed that even if Fischer had not fallen into the trap the game would still have ended in a draw.

In 1969 Fischer quoted my remarks in full in his notes to this game in his collection of memorable games, but continued my analysis and showed in his turn that he ought to have won.

In the winter of 1976 M. Yudovich (the elder) sent me a note by the American grandmaster L. Evans on this endgame (he had collaborated with Fischer on the book in question) with a request to express my opinion on Fischer's analysis.

I sat over the position for about an hour, continued his analysis and seemed to find that Fischer was wrong—he didn't have a win. I gave the position as an exercise in analysis to the pupils in my chess school; 13-year-old Garik Kasparov found yet another way to draw it!

Yes, chess analysis is a tricky business. (See Game 9.)

This time Petrosian won in the qualifying cycle—the next match was due to be played in spring 1963. If earlier I had had my doubts about whether to play the return match I was now contemplating withdrawing from further struggles for the world title. I was attracted by the work on a chess program for computers, but did not know from which direction to approach the task. As long as I did not know I decided to play!

I played the match not too well. A definite effect on my state of mind was produced by an incident in the fifth game. At the start of the adjourned session (the game was adjourned in a winning position for Petrosian) the judge Golombek (England) opened the envelope and, after looking at Petrosian's score sheet, made a losing for Petrosian. The lat-

ter protested energetically; then Golombek shrugged his shoulders and made the move which my opponent insisted on.

After my loss in this game I approached Golombek for an explanation (according to the rules if the judge is doubtful about which move has been made, i.e. if there is an inaccuracy in the writing, then a loss is awarded). Golombek replied that the move was indeed not clear, but he was not in agreement with such an interpretation of the rules. I was infuriated. This legal point had been decided when I was still a young man. I approached Stahlberg—he supported the position* of his colleague.

Then I demanded a photocopy of the score sheet. This was provided a week later. All week I was nervous and managed to lose yet another game. However, the unpleasantness lay in the fact that although Petrosian had written the move down inaccurately there could be no doubt about deciding what move had been sealed, and Petrosian had complete justification for his protest at the adjournment.

I felt bitter at my old friends, the match judges. I just couldn't understand why they had created such a groundless conflict.

By dint of great effort I levelled the score in the match (2-2) after the fourteenth game. Yet I could not adjust to Petrosian's inexplicable style, lost three more games in what followed and with a score of 2-5 with 15 draws suffered defeat in the match.

Petrosian possesses a unique chess talent. Like Tal he does not strive to play 'according to the position' in the sense that this was understood earlier. But whereas Tal tried to get dynamic positions Petrosian rather created positions in which events developed as if in a slowed-up film. It is hard to attack his pieces: the attacking pieces advance only slowly, they get bogged down in the swamp which surrounds the camp of Petrosian's pieces. If at last you manage to create an attack then either there is little time left or fatigue comes into play. In order to understand the strength of the 'new champion' it is necessary also to note the excellent technique Petrosian has in the realisation of positional advantage. It would seem that my 'form' at the time was not all that bad: three months later at the USSR Peoples Spartakiad I scored 8 out of a possible 9!

Unfortunately Petrosian never was a researcher. For such players 40 is a dangerous age. With the inevitable decline of their calculating ability their talent too fades—if it is not refurbished!

From that day when Flohr and I had our discussion with world champion Alekhine in the Carlton Hotel in Amsterdam to the defeat in the 1963 match there had passed almost a quarter of a century. An impressive length of time, twenty-five years of my life, had been given over to the struggle for the world title. Now more time could be devoted to the problem of the artificial player.

But first of all a task in the field of electrical engineering. The AS-motor was 'almost' ready. There already was properly speaking the motor, the transducers, the regulator. The only thing lacking was the executive member, an economic frequency converter. No matter where we applied asking for a transistorised converter, or help in producing such a converter (with a range of exit frequency 0-15 hertz) we met with refusals everywhere. More than that we were given the explanation that such a converter could not be made. So we decided to make one ourselves.

By that time a reasonable collective of collaborators had been got together. From the spring of 1964 the group was reorganised into a laboratory. The development and refinement of the transformer took several years. The ideas on which it was based turned out to be successful.

In the frequency range 0-15 Hertz the converter produced a controlled sinusoidal current.

Soon I suggested a method which facilitated complete control of the machine in steady-state operating conditions. This provided the basis for giving the machine a new name—a controlled alternating current machine.

Yu. Shkaryan (the reader will probably remember him—he had become an experienced research scientist) systematised the refinements which had been worked out and compared them both with the old works of foreign specialists in the field of electrical engineering and with the works of Soviet specialists in automatic control, notably with the ideas of Professor Schepanov. Shkaryan showed that the method suggested by me repeats the method of the German electro-technician Seitz, published by him in the 1930s, and is a variation of the so-called invariant

regulation. Later on it also became clear that parallel with, and independently from each other, these refinements had been carried out not only in our institute, but also in the 'Siemens' firm (BRD) in whose chess club I had given a simultaneous exhibition in 1958 after the Munich Olympiad.

CHAPTER 9.

The Algorithm of Chess Play

A HUGE burden had been lifted from my shoulders—the struggle for the world championship had come to an end. True, I did carry on playing in chess events for another seven years, but this was a comparatively easy business, since from 1963 onwards I greatly reduced my research work in the field of chess. There was more time available for seeking out the algorithm for chess play.*

In August I once again sat down at the chess board—the Spartakiad. I played easily and with success. At the end of the year I took part in a small tournament in Amsterdam, and once again with success. However, the main concern was about the algorithm.

No matter how I racked my brains I could not think anything up, and on a couple of occasions I felt that I would die with the effort. I had to take a rest. Then I took the decision to write down my own thoughts and this turned out to be very important!

In February 1964 I felt that things were on the move, I started to 'visualise' the problem. That is the way that I solve any problem. This method of working is probably characteristic of chess players. A chess player always sees a position, not the one which is on the board, but the one which is in the variation, that is he sees blindfold. I feel that this ability to see blindfold must be common to all outstanding players; it is a sort of visual memory.

* Algorithm—a technical word used in computer science, mathematics, etc. A list of instructions carried out in a fixed order to find the answer to a problem. *Zf.*

So I began to see matters clearly. In June I decided to sit down at my writing table, and to my great surprise a month later I had written something coherent. Subsequently I realised what I had written—I had found the goal of inexact play in chess. Later on I had occasion to have to solve another difficult problem, but this one was probably the most difficult one. The goal of play is the basis of the algorithm. In all, three and a half years were spent in seeking the goal.

The goal of play which had been found turned out to be very simple; you had to strive for the win of material. Properly speaking every qualified chess player plays like that intuitively, but everyone keeps quiet about this, since normally this principle is understood in its vulgar form, in the sense that at any given moment you have to destroy the most valuable enemy piece. Yet if one understands this goal of play in such a way that one is to strive for the optimal material gain within the limits of a visible calculation of variations then it becomes thoroughly sensible.

It was already clear to me then that one has to formalise a concept of positional play as well, but the solution of this problem had to be deferred. It was solved much later.

The goal of play (material gain) defined the next important step. Once one has to destroy the enemy pieces then each piece on the board has its individual goals, its concrete targets. One piece can destroy another by moving over definite squares of the board—the totality of these squares forms the trajectory, in a given case the trajectory of attack. Other enemy pieces strive to defend their piece, while pieces of the attacking side strive to back up the assault. These pieces also act along their trajectories, conditionally called the trajectories of negation. I expounded all this in a monograph and then came the time to play chess again.

It was in a good frame of mind that I sat down at the board—in October 1964 the USSR Team Championship was played in Moscow. Out of six encounters I drew three and won three, but look at those I won against! Three players of the calibre of Smyslov, Petrosian and Shtein had to capitulate against me. I could go to the next Olympiad—the last one in my life.

However, what should I do with the monograph on the algorithm of

chess play? This was an important business. A complete control system (including a human being) carries out three cybernetic functions: receiving information, processing it (taking a decision), and carrying out the decision. Human beings have made fabulous progress in perfecting the first and third functions—this applies to radio technology and thermo-nuclear energy respectively—but as regards the processing of information there is practically no change for the better. Here the human brain has maintained its monopolistic position. A powerful artificial intelligence is needed here; an artificial chess player, an artificial grandmaster, would be the first step in this direction.

I thought about it and decided to send my work to the President of the Academy of Sciences, M. Keldysh. I wrote that I was prepared to work on this topic wherever it might be necessary. With that I went off with our team to the Olympiad.

So, November 1964, Tel-Aviv—the ancient land of Palestine. When your excursion bus is driving along with the Olympiad competitors and your guide states that Alexander the Great's troops marched along this road in his advance on India you begin to look at this modern road with fresh respect. Or you are walking about Nazareth and you learn that here, according to tradition, Jesus Christ began his activity.

In Jerusalem we were guests of the delegation (that is the representative) of the Russian Orthodox Church. Father Hermogen, about 30 years old, with a handsome beard and burning eyes (as in the fairy tale) turned out to be a chess player. He led us into the Orthodox Cathedral and intoned a prayer—both his voice and the acoustics were excellent. After a meal we went on to Mount Zion. A complicated business—go into church and take off your hat, go into the synagogue and put it on. At the doors of the synagogue we met another participant in the Olympiad. He was refused admission without a head covering. But chess players are a resourceful set of people. He put on his head a score sheet for recording the moves of a game . . . and was let in!

Father Hermogen took us to the chamber where, according to legend, Christ had his last meeting with the apostles. It was here that Christ said, "One of you is about to betray me . . ." (Father Hermogen told us everything in detail).

"Was Christ aware of this in advance?" asked one of us in a business-like tone.

Father Hermogen smiled condescendingly, "Christ is God, he knew everything."

Smyslov wanted to take photographs of the Arab part of Mount Zion, but he was forbidden to do so. "On this side, and on that, there are snipers, you have to be careful." When we parted we were issued with certificates showing that from now on we were pilgrims.

In Tel-Aviv we went for a walk on the beach every morning, as the Hotel Sheraton where the players stayed and the Olympiad was played stands on the shore of the Mediterranean Sea. At 8 in the morning it is already intolerably hot, but the sea is pleasantly warm; the sand is so fine that it does not crumble off the skin when the skin dries. It transpires that the sand is not sea sand. For many centuries the spring waters of the Nile have brought river sand to the sea, and the current has piled it up along the Palestine coast. After 4 in the afternoon the heat lessens and it is easier to breathe.

I also visited a village near Tel-Aviv. The working people live there. Children live separately, but pay a visit to their parents every day. The feeding is communal, but not on a self-service basis. People take turns to be the waiters. The food is simple. Money is issued only for books and magazines. The houses are modest but with all conveniences. All the women work.

Yet there are other Israelites—the rich. We were told that land speculators were particularly successful.

I was asked once, "What do you consider yourself to be from the point of view of nationality?" My reply was, "Yes, my position is 'complicated'. I am a Jew by blood, a Russian by culture, Soviet by upbringing."

At the request of our Embassy and of the organisers we went round giving simul's and lectures. As a person involved in the energy field I was sent to Haifa where the electricity company is. I looked round the local power station in Haifa. The staff of the company explained to me that the electricity supply of Palestine was set up by Ruthenberg—who graduated from the Institute of Technology in Petersburg. (They also told

me that he had participated in 1905 in the assassination of the provocateur Father Gapon in accordance with a decision of the Central Committee of the Party of Left SR's, and then emigrated to Palestine. According to them Ruthenberg decided that Palestine's future lay in crop production by irrigation and this should be carried out with the help of electric pumps. With this aim in mind he constructed the River Jordan power station with a capacity of 6000 kilowatts. In the 1947-1948 war this power station was destroyed.) My simul' in Haifa was dragging on when I was handed a note . . . from Umberto Nobile! It turned out that Nobile had not forgotten his Russian (after his unsuccessful expedition by dirigible balloon to the North Pole the Italian expert had worked for some time in Moscow) and he told me that he would like to meet me, but it was already late and he was going to bed. Nobile was visiting chess-player friends in Haifa.

The next day I was shown round the north of Israel, and visited a small Arab village—poverty and poor water supply. That night I set off for Tel-Aviv in a taxi. On the way we were stopped more than once by patrols—it was already a disturbed time then.

This Olympiad too ended in victory for the Soviet team. I had occasion to play several fine games. I lost a particularly interesting endgame to Gligoric.

The atmosphere in the team was not very friendly at first. This was a very dangerous situation, particularly when you consider the quarrels which can arise over settling the team for each match—four players have to be chosen out of six for each match—and everyone tries hard to avoid playing Black more often than White, especially when it comes to playing a strong grandmaster opponent—in that case you might fail to take first prize on your board! I decided to help our officials and formed a Shadow Cabinet, as in the British House of Commons—it included all the players apart from Petrosian. Our captain Kotov quickly realised what was what and co-ordinated his actions with the Shadow Cabinet!

When I recall Palestine, most of all I think of the toiling Jews and Arabs who inhabit this lovely land. Three years after the Olympiad a war broke out there whose end is not yet in sight. Probably there can be a sound peace there, and it will come if the working people who live there

(or have the right to live there) are not interfered with by anyone outside—not by the oil-magnate Arabs, nor by the American Jews with their long purses.

I returned to Moscow and once again plunged into cybernetics. There was no reply from the Academy of Sciences. Then I went to Tsygkin. At the time I had shown him my doctoral work, surely he will look into the chess algorithm?

Tsygkin called for help from his comrade Professor D. Yudin, a specialist in Applied Mathematics. We talked the whole evening. I left my work with them, but there was no reply. Ten years later Professor Yudin was a reviewer of my brochure *The Cybernetic Aim of Play* and gave a very favourable reaction, but at that time my work did not appeal to him.

I was phoned up by Professor M. Shura-Bura (another specialist in Applied Maths) who suggested that we meet. We had become acquainted in the autumn of 1961: after the publication of my article "Men and Machines at the Chess Board" mathematics students of Moscow State University arranged an evening disputation on a chess programme (Shura-Bura was interested in this).

The Professor received me in the presence of two young academics, Doctor of Physics-Mathematics Yevgrafov, and Candidate Zadykhallo. They had read my manuscript; it turned out that Academician Keldysh had assigned to Shura-Bura the task of deciding on the possibility of starting work on the topic. Yevgrafov was unwilling, he was writing a textbook. Zadykhallo was obviously keen, but Shura-Bura did not authorise him to. "Go to Adelson-Velsky at the Institute of Theoretical and Experimental Physics, they have a chess program ready there. Go and consult with them."

I went to this institute and discussed the matter with Adelson-Velsky for about three hours. "There is the kernel of truth in this," said Georgy Maksimovich, "We would be glad to co-operate with you on this algorithm, but what can we do? We have been forbidden to work even on our own program. If only we could get an instruction from the Academy of Sciences..."

I was pleased—I had found fellow-workers in the field. (Later on it

became clear that Adelson-Velsky had dissembled. His group had continued its work and the 'Kaissa' program soon played in a match against the Californian program of Kotok-MacCarthy.) Once again I wrote a letter to the President of the Academy of Sciences.

At the beginning of 1965 Flohr and I set off for a tour of Holland, gave simultaneous exhibitions, and then played in the Jubilee tournament at Noordwijk—it was the seventieth anniversary of the Chess Society of Leiden.

Noordwijk is an enchanting holiday resort village on the North Sea coast. An endless sandy beach, dunes, a sea front with hotels, and obviously, a lighthouse. Every day despite the cold February wind I walked several kilometres through the caked sand of the beach. There was hardly any company on the way; just occasionally one would come across a cavalcade of horse-riding enthusiasts. Then I was joined by the Yugoslav Trifunovic. (Larsen tried, but then gave up.) It would seem that the strolls were useful. I played very successfully and Trifunovic came second!

As soon as I got back to Moscow Shura-Bura phoned up: "Mstislav Vsevolodovich Keldysh has asked me to pass on the fact that there will be no reply to the second letter..." Everything became clear! Yet had the President of the Academy of Sciences read my letter?

On 7th May 1965 the seventieth anniversary of the discovery of radio by A. S. Popov was celebrated. Foreign scientists were invited to the celebrations. I was phoned by Professor Ilyin (the same person who twelve years earlier had been a rival of ours in the comparative tests on regulators for synchronic generators) who spoke on behalf of the famous mathematician of our days, the author of the theory of information Claude Shannon (USA). The American had read my article "Men and Machines at the Chess Board" and wanted to see me.

The meeting took place in the Hotel Ukraina. A female interpreter had been invited, but things didn't go well—the lady did not know the technical terms and mixed things up. Then I came to her assistance (I knew the technical terms) and things became easier. Ya. Tsygkin turned up unexpectedly, and brought another American professor—Lyufy Zade. Zade is an Iranian by nationality, lived in Baku till the age of 6 and has

an excellent command of modern spoken Russian. The conversation with Shannon simply rattled along.

I told them about my ideas, the Americans listened attentively. Then Shannon suggested playing chess—he had learned how to play at the age of 28 (Shannon is five years younger than me). He plays at the strength... of modern computers! After the game he asked me to give him something to remember me by. I reconstructed the score of the game blindfold, signed it and handed the paper to him.

Shannon appealed to me—he had not lost the enthusiasm of youth. Slim, upright of figure, thin of face (like the late Joliot-Curie), nervous fingers.

"What are you by nationality?" (Shannon was in no way like the standard American). He was embarrassed, but revealed the secret: he has French, German and Irish blood!

At the time he was at the Massachusetts Institute of Technology. If he wanted he gave lectures to the students, and had no other duties. We said good-bye to the author of the theory of information and went with Zade to the restaurant. Over dinner I get to know the special features of American academic life. "Why is it that in the USSR the basic scientific forces are in the Scientific Research Institutes, while in the USA they are in the institutes of higher education?"

Zade told me that in the USA the research institutes belong to private firms, and when a researcher gets beyond the age of 40 and can no longer work with the same energy the firms terminate his engagement. So, as soon as a scientist gets well known, he tries to get into a university.

"Yes, your ideas appeal to me," said Zade, "but you have to limit the problem somehow."

"I am thinking about this," was my reply, "and I have already thought up the name for this limitation—the horizon, that is the problem is solved within the limits of visibility but the limitation itself has not yet been formalised."

"Horizon, that is a good name," said Zade.

Soon after this conversation the "horizon" was found. The time of motion of an attacking piece was shortened along the assault trajectory, or, putting it another way, the length of the assault trajectory was shortened.

I supplemented my manuscript and thought; "How can I get it published?" Those I had applied to had shown me the door. Yet possibly there are organisations and programmers who would like to work on it? I could only find them by having the work published; I had to busy myself with the propagandisation of new ideas.

L. Abramov* suggested that I send the work in shortened form to the *Bulletin of the TsShK* (the Central Chess Club) and Simagin would publish it. Vladimir Pavlovich Simagin was the editor of the *Bulletin*. My relations with him were cool, since things had so turned out that he had more than once been a second of the opposing side in world championship matches. Simagin was a gloomy person, but decent. I took the risk and sent him my manuscript.

Simagin reacted cautiously and sent the work for an assessment to Candidate Master Aramanovich—he was a senior lecturer in Mathematics. Some time later I was handed a polite but negative review (if one were to read between the lines the assessment was destructive).

"Vladimir Pavlovich," I said to Simagin, "I ask that you be present at a conversation between Aramanovich and me after which you will take your decision." The editor agreed.

During this conversation Aramanovich opened up and went far beyond the bounds of his written comment. I reacted confidently.

"Vladimir Pavlovich," I said, "is it clear to you now?"

"Yes," replied Simagin (Aramanovich looked at me with triumph in his eyes), "we shall publish it by way of a discussion paper." I shook the hand of my old opponent; the reviewer could not hide his confusion!

Simagin's decision was very helpful, since after publication there would have to be a discussion. This took place on 13th May 1966, in the Chigorin Hall of the Central Chess Club. Both mathematicians and grandmasters came to it.

After the report a powerful assault began: Shura-Bura, and Adelson-Velsky, and Aramanovich. One professor of unusually respectable appearance gave his views (later Aramanovich indicated that he had grad-

* A master, senior chess judge and long-serving official of the Soviet Chess Federation. 77.

uated from Cambridge). He proceeded to instruct me on how to draw up a chess algorithm. Unexpectedly one young man declared that he liked Botvinnik's algorithm.

"Who are you?"

"Butenko."

"From where?"

"From Novosibirsk."

The dispute flared up again with renewed force, and after the closure of the formal disputation, took on a not quite Parliamentary form. The Cambridge graduate kept on listening, and suddenly declared, "Yet possibly Botvinnik has done something classical?" Everybody started hushing him up.

Rumeyev came up to me. "I have to fly, I'll phone you later," and then disappeared. It was a year before he phoned me. He is a remarkable person, Bashir Iskandarovich, an upright soul, a great expert in the field of computer technique (he had completed only two years at the Moscow Institute of Energy, but then by way of exception he was given his doctorate). He had told me that if anyone could cope with this problem then it would be me. Then suddenly he decided that I had failed. Yet we must tell the truth, he gave me great support, and continues to support me now!

As for Volodya Butenko we soon started collaborating and worked together till 1970.

One unexpected feature for me became clear at this disputation. It turned out that methods of obtaining trajectories on a computer were not known. Both Shura-Bura and Adelson-Velsky alleged that trajectories could not be got in a simple way, and hence the algorithm was no good!

I sat down to the task for a fortnight and found a simple method—with the help of block diagrams 15 by 15. I wrote an article, took it to Simagin and he published it straight away.

Butenko duly made a programme (for a M-20 machine) which produced all the necessary trajectories. My opponents became more careful.

Experience has shown that you cannot work successfully when collaborators live in different cities and only meet episodically. My collaboration with V. Butenko could not but come to an end.

In July I was playing chess again. An international tournament in Amsterdam. The event was organised by the IBM firm. The American firm has its factory here. Flohr and I lived in a motel which is on the outskirts of the city on the motorway to The Hague. The factory was not far away. The opening ceremony took place there and a computer was used in making the draw. We also played nearby in a local modern... church! Just in front of the entrance stands something like a water tower on four tall pillars. It turned out that this was the bell tower. There is no bell ringer, of course, since the bells are automatically controlled.

It was nice to play there, everything close by, and the air comparatively fresh in this new part of Amsterdam. I played well, but in one game, against Zuidema, exceptionally well. The game was adjourned with me the exchange up, but after my inaccuracy just before the time control the win had become unclear.

Clearly God helped. I sat in the church for half an hour with my pocket set and found such a striking 'quiet' move, Re8!!, that Zuidema did not resist for long.

An hour later one of the competitors brought the news that Zuidema had resigned in a theoretically drawn position! The endgame with rook and pawn on g5 against a black-squared bishop should be drawn.

I laughed. The win is a theoretical one, and I had watched Smyslov win such an endgame against Simagin in the 1940s. Soon the same master hurried up to me, "Everything is in order, the g-pawn is sacrificed and Black loses his bishop."

On my return to Moscow I continued my search for a publisher (the manuscript had now been supplemented by the method for seeking trajectories). I went to 'Nauka' (Science. Tr.) where they explained to me that they published material only by decision of the publishing council of the Academy of Sciences. "Whereas in the editing of popular science literature the position is different..."

So I went to this editorial office to see N. Prokofiyeva.

"Who can give an assessment?"

I explained that Rumeyev could give a positive one, and Shura-Bura or Adelson-Velsky a negative one.

Natalya Borisovna started laughing.

"We also have our own reviewers. Nikolai Andreyevich, will you provide us with an assessment of Botvinnik's manuscript? No, no, it isn't on the history of chess, it is cybernetics."

That is how fate brought me together with Krinitsky!

I visited him at the Main Computer Centre of Gosplan USSR. Krinitsky was chief mathematician at the computer centre. We spoke together for four hours. Only after three hours did I discern that Nikolai Andreyevich did not perceive the difference between the horizon and the maximum length of a variation. I explained this—and we started to understand one another.

A tall man, slightly stooping, a small moustache, spectacles, just as if he were a country doctor from Chekhov's stories, Krinitsky was in the army for many years. He went all the way through the war and then became a scientist. He is a very straight and stubborn person, and hard to talk to. Yet, just as Ragozin could see such things, so too Krinitsky sees what others do not notice. You can talk to some Academician, yet when you recall the conversation you just shrug your shoulders. Talk to Krinitsky, it would seem there is nothing special, yet then you begin to have a deeper understanding of the problem.

Nikolai Andreyevich liked both the ideas and the manuscript. He took a long time over it with me, made emendations in the text (from the mathematical point of view) and had many annotations.

"Nikolai Andreyevich, possibly we should re-type it, otherwise they won't be able to follow it at the publishers?"

"What do you mean?" was the answer. With a cunning laugh he said, "At the publishers they should be able to see the work done by the editor!"

However, it was not so easy to get the work published through the popular science literature editorial office; they too had their own publishing council. Fortunately the Chairman of the council was Academician K. Ostrovityanov (he and I were on good terms) and he let the book through without any delays.

In 1968 the brochure was published.

All this time I was pretty active in tournaments. At the end of 1966 I had gone to Hastings for the third time. We played in different premises up on the hill. There was no ventilation and it was stuffy. The composi-

tion of the tournament was a young one: Mecking, Balashov, Keene, Hartston, Basman.... Everything hung by a hair (at the start of the event I had blundered a rook away to Keene), but fortune smiled on me and I took first prize.

After the tournament in the company of my old friend Barry Wood, editor of the magazine *Chess*, I set off on a three-week tour of England and Scotland. Wood had just got a new 'Austin 1800' and ran it in during the trip.

Wood lives in Sutton Coldfield near Birmingham in his own house (over a third of a century Wood had still not paid off all the cost). It is a large house, but he has a large family. When we were making our appearance not too far away (about 200 miles) we would travel back to Sutton Coldfield on Saturdays for a rest.

Wood is a small 'capitulist'; he has his own miniature printing works, and prints both his magazine and books on it without delay. In his youth he was both master and man, but nowadays he is just editor!

We visited the south, the east and the north-west (in Scotland) and the west of the country. Chess has become more popular in Britain than before the war. Nowadays in England chess players are as numerous as in Holland.

Wood himself translates chess notes from Russian to English; if one hears in mind that I know English a bit then it is no surprise that we found a common language.

The appearances were of a standard form: first of all a chat with journalists, then Wood would speak, then the simultaneous exhibition and once again a chat. During the simul' Wood would open his book stall, where apart from books there were pocket chess sets, badges, chess ties and so on.

The strongest chess clubs were in the universities. The hardest simul's were in Nottingham, Cambridge and Oxford.

The Scots revere the memory of Burns, and I was presented with a book of his verse in Glasgow. The Scots were surprised to learn that I had read Burns—they had not heard of the translations done by Marshak. "This is remarkable," said Wood, joining in our conversation, "all that remains is to translate Marshak and the English will be able to read Burns...."

The language of Burns is not comprehensible to the modern Englishman.

In London I travelled with the captain of the chess team of the Soviet Embassy, N. Berdennikov, to the House of Commons. The Embassy chess players sometimes play a match against Parliamentarians. We were shown round the House of Commons, the House of Lords and the House of Commons church. Finally a member of the House of Commons, Mr. Silverman (we are old acquaintances from Moscow and Birmingham, he is a first-category player), led us to the drawing room where the MPs who are chess players meet.

Over lunch all sorts of topics came up, mainly connected with chess. One Conservative chess player decided to try me out in another field. "How do you assess the international situation?"

"Pessimistically. The world is permanently divided into two irreconcilable camps—the chess players and non-chess players." General laughter ensued.

After lunch Mr. Silverman led us to the gallery, and we were present at the current sitting of the House; traditions are religiously preserved!

I was very appreciative of the hospitality of these chess friends amongst the MPs. What was particularly nice was that they did not ask me to play chess!

My tour was over and after a six-hour journey on a Dutch ship across the North Sea I was on my way back to Moscow in a Soviet sleeping car.

At the end of 1967 Smyslov and I set off to the international tournament at Palma de Majorca. As is sometimes the case everything was settled at the last moment, and Smyslov and Kotov (who were accompanying us) were not provided in time with French transit visas. We were due to get our Spanish visas in Paris.

At Sheremetyevo airport the frontier guard would not let my colleagues go abroad (lack of visa). A quarrel broke out, and a colonel, head of the frontier guards, came over to us. Thank goodness he turned out to be a chess player, but all the same there was nothing he could do. I employed all my eloquence.

"All right," said the colonel in anger, "you can go, but all the same without visas they'll send you back from Paris."

In Paris everything was simple. A girl in a forage cap straight away authorised my comrades a stay of three days in the French capital. We got our Spanish visas and flew on to Majorca.

The tournament was a good one: Larsen, Portisch, Gligoric, Ivkov. At the start I lost to Damjanovic (when two pawns up!), and the lead was seized by Larsen.

Playing conditions were far from easy. It was hot, and in the hotel where we lived and played it was stuffy. Gradually we adjusted to it and the contest became quite sharp.

Towards the end of the tournament the organisers decided to play two rounds on Menorca. I was not at all keen on this, but what could I do? We flew there.

Our excursion came to an end, but a storm blew up over the sea. You couldn't go out of the hotel, otherwise the wind would knock you off your feet. Menorca is a flat island and the wind was just as if you were on a ship! This was a rest day, but the next day a round was due on Majorca, so we would be playing after coming straight from the plane. I went to the organisers and suggested we do the trip across today.

"Out of the question, there are no seats left on the plane."

Unexpectedly I got to know that Larsen and his wife were due to fly out at any moment. Well, well! We were all going to play after flying across, whereas Bent would play after a pleasant sleep in the hotel in Majorca? I explained the situation to Gligoric and O'Kelly. Gligoric took it upon himself to go and speak to the Larsens. A minute later he came back red in the face. "It would have been better if I had not gone"—he had got it in the neck from Madame.

The organisers offered to fly me out too. I agreed, but along with all the other players. The Larsens went to the airport, but, alas, because of the bad weather it was closed. They came back. Diplomatic relations with Bent were broken off.

Although I won against him at the finish Bent finished half a point ahead of Smyslov and me (I had not been at my best in the last two games).

Then came the final banquet. We sat with local players who freely criticised Franco. Their attitude towards us, Soviet citizens, was friendly.

I heard behind me the voice of Larsen, "Mr Kotov, is it at all possible to use you as intermediary and ask Mr Botvinnik for his autograph?"

I turned round, we both started laughing, shook hands and were reconciled. Larsen speaks Russian well; when he was in the Danish army he was sent to the Russian school.

We sat in the bar till the early hours discussing all sorts of topics: chess, politics, economic problems, the chess-playing computer. The Dutchman Donner was angry, he could not understand what we were talking about. Larsen, Gligoric, Portisch, Ivkov, Damjanovic know Russian; at times Gligoric, at times Larsen would translate for him. At this time I became friendly with Svetozar.

Gligoric is a surprisingly cheerful and lively person. When he was 50 he still played in the team made up of the veterans of Yugoslav football.

"Svetozar, you didn't play in top Yugoslav teams when younger?" "That's right, but they still keep me in the veterans' team since I am the quickest runner!"

He is one of the few foreign grandmasters who always links the opening with a plan for the middle game. His positional judgement is excellent—in 1965 at Hamburg he won a game against me which was very fine from the positional point of view. At Majorca I took my revenge.

On the way back to Paris O'Kelly 'was in charge' of the the chess-playing group. Smyslov and I were due to fly on whereas Damjanovic and Kotov intended taking part in a tournament in Paris. We flew in to Orly airport and only then remembered that no one had a visa (except O'Kelly—as a Belgian he did not need a French visa).

O'Kelly in his superb French started into polemics with the airport girl officials, telling them that Damjanovic and Kotov need a visa for two weeks. The more senior girl said to him, "How can you demand this, you are a Frenchman?" "I am a Belgian" was his parry.

I noticed that a man in the uniform of a frontier guard was listening in to the conversation, but not to O'Kelly's wrangle with the girls, rather to the Russian conversation. I asked him, "Do you know Russian?" "Yes." "Possibly you can help us?" and I introduced myself.

How everything changed! My official gave a peremptory order, the girls fell quiet, and straight away in the passports appeared visas for three days ("Later on you renew them at the police station", explained our new acquaintance). He was from Russia; during the war as a boy fate had carried him away to France, and he was a keen chess player. He shook our hands for a long time when he put us in a taxi!

Three months later Smyslov and I were once again in Paris this time *en route* to the Monte Carlo tournament.

The Principality of Monaco consists just of Monte Carlo, and everything depends on tourists and the casino. Many people try to become citizens of Monaco—no taxes to pay, no liability to army service. Yet even those who live in France close to the principality seek work in Monaco.

Monsieur Louis Torrelle, senior waiter of the Hotel Balmoral where the players were staying, travelled every day on his moped from France to his work in Monaco. His daughter was studying Russian and exchanged letters with the daughter of international master Estrin, who in her turn was studying French at Moscow State University. A man of about 45 of medium height, Torrelle conducted himself with dignity. Three of us would sit at the same table: O'Kelly (he was the tournament arbiter), Smyslov and I. Each day O'Kelly got a quarter-litre bottle of Beaujolais, while Smyslov and I ordered tomato juice (which, by the way, cost more). Torrelle would use his influence to serve us the juice in huge glasses, and winking each time, he would triumphantly announce "Grand champagne de Monte Carlo!"

We played in an exhibition hall on the sea coast. I had two interesting games there—with Portisch and Benko. With Portisch it was a firework of sacrifices as in the days of Anderssen. With Benko I carried out a very exact plan as Black in an English Opening. Against Larsen I drew and won games and once again trailed Bent by half a point!

We were taking a stroll by the casino. There was a memorial board: in this place there was the first performance of Diaghilev's ballet company. We fell silent for a while as we realised that they cherish the memory here of the emissaries of Russian culture.

We were too late to order tickets for the plane—it was Easter and everything was already taken. O'Kelly got tickets for the train. I slipped

up here; I really shouldn't have asked Alberic about this, he loves economising and booked us on to a train that had no restaurant car. As soon as we made a stop the passengers made a dash for the refreshments man on the platform who soon got rid of his stale sandwiches. The first time we were too late, but then it went all right—Alberic has long legs and caught everybody up in the race.

First of all we travelled westwards along the coast. The French Riviera is beautiful: the railway, the main road, the endless beach and every half kilometre a snow-white fourstorey boarding house. From Marseilles we turned northwards, to pass deep rivers, leafy woods, fields, remarkable tidiness (only by Lyons was there rubbish around). We arrived at Paris towards evening. On the station there was a lot of pushing and shoving, well, just like my native Moscow. I remembered Charing Cross in London, everything is calm, though they leave the station quickly.... The character of a nation—you can't deny it!

We stayed on the outskirts of Paris in a hotel where the proprietor is a chess player—O'Kelly is true to habit and always stays there. Monsieur Vieuxfond is very hospitable, just as his wife is. In fact she looks after everything, while the proprietor plays chess.

I took a fancy to a dress of the proprietor's wife (it had large white flowers). "Yes, I've seen a dress like that in a shop," said Alberic, "let's go and buy one for Gayane Davidovna." But in the shop there wasn't a dress like this, as the flowers were small, not large. Yet we had to take the dress after all.

Madame Vieuxfond laughed when she heard; it turned out that she had sewn the flowers on the dress herself. She sewed flowers on the dress for my wife.

Alberic speaks Russian well. When we got to know each other in 1946 at the Groningen tournament he already knew Russian then. Coming from an impoverished Irish aristocratic family O'Kelly is probably the hardest worker amongst grandmasters. He studied Russian by the simple device of living for a time in Brussels in a family of Russian emigres. He works hard at keeping fit. He bought an exercise bicycle, and every morning 'rides' twenty minutes on it. For the first ten minutes he feels nothing, but for the next ten the sweat pours off him. That is

why O'Kelly strides along, tall and upright, with an average speed of 8 kilometres an hour. I can easily manage 6 kilometres an hour. When we go for a walk together a sort of average is established, which I can only just keep up with!

However, to return to the chess program....

CHAPTER 10.

The Artificial Player

IN THE summer of 1968 a letter came from Heidelberg (BRD). Through the agency 'Mezhdunarodnaya Kniga' ('International Book.' Tr.), Herr Peters, an official of the publishing firm 'Julius Springer' (not to be confused with the Hamburg publishing firm 'Axel Springer', wrote Herr Peters), informed us that his firm had decided to publish the brochure *An Algorithm of Chess Play*,* in English, in their New York branch. My task was to check the translation and write a foreword to the English edition.

Of course I was glad to agree, since this was recognition—it would become easier to organise work in Moscow on writing a program. Soon the translation came, done by a certain Arthur Brown. Who he was I did not know at the time (later it became clear that Brown was a science commentator of the newspaper the *New York Times*). All I could make out was that he was not a chess player, since he did not know the chess terms in English, but he knew Russian quite well and had studied the book in all its finer points.

When Krinitsky and I worked at the manuscript and my editor noticed some parallel between a computer and a human being he had put this in inverted commas every time. Brown, it is probable, saw nothing wrong with such an analogy and, a surprising business, took out all Krinitsky's inverted commas and those which the author had used prior to editing were left in!

* The English title was *Computers, Chess and Long-Range Planning*. Tr.

I asked a girl who knew English well to translate at sight from the English version into Russian while I followed the Russian text. When there was some sort of discrepancy there was a supplementary check, and, if necessary, a correction. The translation was put into perfect order.

In 1971 the book came out in its English translation. It was superbly done. In his foreword Brown praised me as if I were Leo Tolstoy. Reactions abroad were favourable; only in one English publication was there such a crude review that its bias was obvious.

I was very keen to publish Brown's foreword in Moscow—again for propaganda purposes. The editorial board of *Za Rubezhom* (*Abroad*) at first agreed and then refused. Properly speaking, not all of the foreword would have to be published, but only a page and a half of typed text.

Finally the staff of *Komsomolskaya Pravda* suggested publishing this in their newspaper on condition that simultaneously they printed an interview with a Soviet specialist.

Krinitsky agreed to give an interview if I would help him. I wrote questions for the journalist side (thank God I know what they normally ask) and the answers for Krinitsky (I had also studied him). To my surprise Krinitsky added a correction. He declared that Botvinnik's algorithm had no connection with heuristics at all. Botvinnik, he said, had got to know himself and had formalised his method of thought in the form of an algorithm.

The newspaper finally published the interview late—and nothing else! A pity; good relations with the newspaper were broken, and only re-established in 1975. By then extracts from Brown's foreword had been published in the magazine *Zarubezhnaya Radioelektronika* (*Foreign Radio-Electronics*).

My last successful tournament was in January 1969 at Wijk aan Zee (Holland). A son of the first FIDE President, A. Rueb, worked for the large iron and steel firm 'Hoogoven' (and by the way the wife of Rueb, junior, had spent her youth in the building that now houses the Soviet Embassy in The Hague). Under the direction of Rueb junior, the traditional chess festival has been run for many years: a grandmaster tournament, a master tournament, a ladies tournament and, at the end of the

week, many chess fans come here to play in various events of the festival. We lived and played in a students Hall of Residence. Everybody had a separate room* but the walls were so thin that everything could be heard.

In the middle of the tournament I caught a cold when I failed to check for the presence of hot water in the cold shower. It was a good thing that I had 6 points from seven rounds, so that with this reserve in hand I could hold out to share first place. Properly speaking, I had few hopes of victory since in my game with Portisch for a long time I stood to lose. But in the first adjourned session the Hungarian grandmaster let slip a simple win.

I was lying in bed (because of the cold I had) and working on my pocket set. Keres came in and asked, "How are things?" I explained that if I could get a certain position then it would be a draw, but how to reach this position—I just don't know. Keres took the set, thought a little and said, "Can't you play it like this?" We looked at each other and burst out laughing. For a long time we couldn't calm down, so simple, unexpected and elegant was the decision Paul found. Of course, the game ended as a draw and Portisch did not win the tournament!

After the tournament—the traditional banquet for a hundred people, possibly more. This was first held straight after the war after the first festival. Then the Dutch were short of food and the menu of the 'celebration' dinner willy-nilly was modest: pea soup. The years went by, but the pea soup remained. I tried two platefuls, yes tasty, but apart from the soup, ice-cream and coffee there was nothing else!

I was invited to appear by my friends from the Chess Society of Leiden—after the Jubilee Tournament, Noordwyk, 1975 I was elected an honorary member of the Society. However, before my appearance we had a chat over a cup of tea. The Society was proposing to mark its 75th anniversary in spring 1970 by organising a Botvinnik-Fischer match. I thought about it and agreed.

The time had come for me to stop playing in chess events. True, as the tournaments at Majorca, Monte-Carlo and Wijk aan Zee showed, my

* 'Doubling up' is common for players in East European tournaments, even when staying in hotels *T.*

results were not bad and the games were interesting, but I could not cope with three responsibilities in my life. Electrotechnology, the chess algorithm and practical play was too much.

In the winter of 1969 I decided that in a year's time I would stop playing in tournaments.

This was, of course, a mistake. I shouldn't have made my mind up before the event. I played in three more events—Belgrade 1969, the Match of the Century* and Leiden 1970, but I could no longer play as I used to do. I tried hard but there was nothing to be done—in my subconscious I no longer understood why I should work, analyse, strain myself if I was leaving chess practice. In these events I had frustration, apathy, and overall played unsuccessfully.

I discussed with my Dutch friends the conditions of the Fischer match and reached complete agreement. But Fischer? You know how difficult it is to have dealings with him? Will he really keep his word? "We have foreseen everything", came the answer, "All the negotiations will be through lawyers; the agreement will have juridical force."

The Dutch behaved confidently, but subsequent events showed that their confidence did not have a serious basis—I already understood the American grandmaster pretty well.

But it would have been advantageous for Fischer to have played a training match with me; no matter what its result might have been (probably Fischer would have won) the American could have learned a lot from me. The negotiations began and I suggested a match of 16 games to be won on points. Fischer suggested the first to win 6 games in an unlimited number of games.

Neither I nor the organizers could accept this. The organizers were worried about an excessive number of games, and I was not so young that I could play more than 16. We agreed on 18 games and Fischer conceded this. I prepared for the match until September 1969. When the lawyers sent out the agreed scheme and the only thing left was to sign it, Fischer once again demanded that we play to 6 wins with no limitation

* The USSR-Rest of the World Match played on ten boards at Belgrade, Easter 1970. *T.*

on the number of games. The negotiations still continued up to the New Year. In December during the Belgrade tournament Dr. Weiland, representative of the Leiden Chess Society, travelled to see me. I explained to him that I could not play more than 18 games, but made the compromise suggestion: play for 6 wins, but if after 18 games this hadn't been reached then the winner would be on points. Fischer did not accept this either!

It is clear now to many people that Fischer has a maniacal fear of beginning a competition. It would seem that this is the reason our match, objectively so useful to the American, was subjectively unacceptable to him. Then the Dutch decided to run a four-man match tournament.

In December 1969 I visited Yugoslavia for the first time. There were interesting games in the Belgrade tournament, in particular a successful rook and pawn ending against Matanovic. But the main outcome was that I found many chess friends in Yugoslavia.

We lived and played away from the centre, in the Hotel Yugoslavia, in a new suburb of Belgrade. Sometimes I told Geller and Polugayevsky various episodes from chess history. They were full of surprise, and that is when I decided to write my reminiscences.

My comrades were very 'busy'. Once in the centre of Belgrade they were caught in the rain. They went halves in buying an umbrella and got back to the hotel. Who did the umbrella belong to then? This was decided by means of 'the Siamese Fool'. The whole tournament they battled away at card games while the other participants looked on with pleasure at these battles. The umbrella passed from hand to hand, but at the end of the tournament Geller was the owner. I am not a supporter of such a sort of tournament régime. Then there was the prospect of the Match of the Century—the USSR team against a team of all other countries. It was an old idea; when I was active in FIDE I rejected this idea as I felt that it could have undesirable consequences from the point of view of FIDE solidarity, but what could one do?

Just before the match there was a repetition of something like what happened in 1952, when I was excluded from the Olympiad side. A number of grandmasters—those who were playing on the top boards—made sure that I was put on board 8. This was obviously speculating on the fact that I would refuse to play in the team. Most likely this is the decision

I would have made but the danger of a loss by the Soviet side was so great that I agreed to go to Belgrade.

But lack of harmony in a team is always punished, and the punishment this time was just as harsh as in 1952. The top boards failed and the awkward situation was saved by those whom the 'authorities' had not been relying on. Yet there were no objective reasons for putting me lower than fourth board! Both abroad and in the USSR the result of the Soviet players on the top boards received the appropriate assessment.

And so my last tournament—Leiden 1970. We lived in Noordwijk and played at Leiden. It was hard for me to play. In the hall of the school where the tournament was played it was damp, there was no ventilation. I did not get any creative satisfaction from my play.

So there only remained my scientific work. Yet I did not give up chess, I merely stopped playing in tournaments. As long ago as 1963 on the initiative of G. Goldberg, a children's chess school was formed in the sports society 'Trud'. Amongst my pupils were Karpov, Balashov, Razuvayev, Rashkovsky, Zlotnik and others. They all later became masters and three of them grandmasters. The school functioned for eighteen months.

The school studies started up again in 1969. First of all there were no big successes on the part of the pupils, but in 1975–1976 things went better: Losev, Kharitonov, Akhsharumova became masters, Akhmylovskaya a grandmaster, Zaitseva won the Moscow Women's title, Kasparov became USSR Schoolboy Champion, then a master and won the right to compete in the USSR Championship Super League—a unique achievement. Yusupov became World Junior Champion and Dolmatov followed his example a year later.

I conduct the studies in accordance with a system tried before the war in the Leningrad Pioneer Palace. We work together, but we examine the play of one of the students. He makes comments on his games and reports on his attempts at the homework solving. This is the way to get to know a player's spirit, to study his good points and his failings. In the course of discussion I give him advice, criticism, while all the other students take note of this and participate in the discussion. Finally the student is given a verbal assessment of his creative and competitive nature

and he is handed an individual set piece homework which should help his further progress.

Nowadays we have many young players—Karpov, Bakishov, Vaganian, Belyavsky, Romanishin — and those slightly older—Gulko, Tseshkovsky—but to tell the truth only one of them, World Champion Karpov, is a player of world stature. About the same state of affairs prevailed in the 1930s, but then things improved in the decades that followed. Now too Soviet players have an interest in seeing a further growth of young talents. The competitions run by the Central Committee of the Komsomol help to popularise chess amongst schoolchildren and give us hope for a fresh reinforcement of the ranks of grandmasters. There are such events as the "White Rook" Tournament, to determine the strongest school chess team in the Soviet Union, and the "Pioneer Palace" Tournament where in the final grandmasters give clock simultaneouses against our best chess Pioneers.

A striking confirmation of our hope is the successes of Garik Kasparov who is an excellent student in his school work, and plays well in tournaments and has a serious involvement in chess analysis.

Our Soviet state has been exploiting the educational power of chess for more than half a century.

I have not only continued working with youngsters and helping our young masters. In 1975 I returned to analytical work and published the collection of games *Anatoly Karpov: His road to the World Championship**.

During these years I had to travel round the Soviet Union a great deal, a large part being played in this by Max Euwe who expressed a desire to travel through Siberia and the Far East and meet the local players. Naturally I offered to accompany my old friend.

Generally speaking, in the Netherlands I have many friends apart from Euwe, and not only amongst chess players. My chess fate has so worked itself out that I have been there on official visits more than a dozen times. There are many chess players in Holland: amongst the intelligentsia and workers; grown-ups and children; Catholic and Protestant. Chess is played in all layers of society. So when, almost twenty years ago, the

* Pergamon Press, 1978.

'Friendship Society USSR-The Netherlands' was founded I was chosen as President of the governing body. The Society unites both Soviet specialists involved in the culture, economics, art and history of the Dutch people and all those interested in this distinctive and beautiful country. Our governing body tries in its work to strengthen good relations between our two peoples, a cause begun as long ago as in the reign of Tsar Peter the Great (the small house where he lived in Zaandam is carefully preserved).

Let us return to our Siberian trip with Euwe. We visited Sverdlovsk, Novosibirsk, Irkutsk, Bratsk, Khabarovsk. At the last-named place we were due to part. I still had to visit Petropavlovsk-on-Kamchatka and Vladivostok while the Dutch grandmaster was setting out by sea from Nakhodka to Japan.

The time came to say good-bye. "I want to take a bottle of champagne with me on the boat," said Euwe. We went to the provision shop, but champagne was not on sale. "That can't be right," said the Dutchman, "Here is an advert, 'Drink Soviet Champagne!'" We had to buy a bottle in a restaurant.

While meeting Euwe at Sheremetyevo airport in Moscow it had seemed strange to me that the professor had not filled in a declaration form about the foreign currency he had with him (he must have some since he was travelling further, to Japan), but I did not interfere. In Khabarovsk Euwe asked me, "What should I do with my foreign currency? I don't have a declaration form." I rang through to Nakhodka to the head of customs and got the clear reply "We confiscate currency if there is no declaration."

"Professor, how much currency have you? How much do you need to live off in Japan? Give me the extra."

Euwe submissively surrendered it. "What will you say in customs if they ask you about currency?" "I'll say that I have some."

So, a stubborn fellow; all right, I'll outwit you. "And what if I take all your foreign currency and give you a sealed envelope on which is written that it is for Professor Euwe, but only to be opened on the boat? What will you say then?"

"I'll say I don't have any currency." We both laughed and that is what

was done—I took the sin on my own soul. Euwe returned to Amsterdam via Moscow. We went with him to the customs administration and said that the Professor had forgotten to fill in his declaration and the mistake was put right on the spot.

Euwe is a complex character. A talented and sharp person, lively and kind, but when he was head of FIDE, as at the chess board, he was insufficiently principled in his presidential actions.

I liked Kamchatka. We swam in Paratunka where the water is dark but clear. There is a swimming pool with water at 37°C and another with the water temperature 40°C. I was forced to abandon the 40°C water at once but the 37°C wasn't bad! There were many chess players there. I had only two days and did not have time to pay a flying visit to the valley of geysers. When we left there was low cloud cover and I thought that even from the air Kamchatka would not be visible. We passed through the cloud layer and—a miracle. The Avchinsky and Koryaksky volcanoes 'pushed their way' through the cloud just as we had done, and were easily visible. A marvellous sight.

When Euwe and I were in Bratsk the interest there was exceptional. As we approached the building where we were to speak, several players were standing with a placard that read "Welcome to Euwe and Botvinnik!" These players had come specially from the construction site for the Ust-Il'mskaya Hydro-Electric Power Station. They were six first-category players who had flown in on a special plane.

Later Ya. Estrin and I (but without the Dutchman) travelled to the site of the Sayano-Shushenskaya Power Station. Nature is at its most powerful there—the height of the dam will be 300 metres. We rode on a motor-launch downstream along the Yenisei to Shushenskoye and looked at the memorial. It was surprising in the 1970s to be able to examine pre-Revolutionary Shushenskoye—the village shop (all the goods were on the counter), the police station where Lenin reported every day, the cottage where he lived during his period of exile. I had a different image of this period earlier!

I was particularly interested to visit Shushenskoye since during his exile Vladimir Ilyich Lenin played chess with his comrades. Nikolai Nikolayevich Lepeshinsky has a lively description of one game in his

memoirs of Lenin (I heard the account directly from Lepeshinsky when we were holidaying together in 1933 at Teberda—he also played in a simul¹ I gave at that time).

Up to 1917 Lenin was interested in chess from time to time (he got really keen on the game only when he was working in Samara as an assistant to the barrister Khardin who was a strong player). The well-known study by the Platon brothers excited his admiration, but after the October Revolution Lenin no longer had any time available for chess.

We also made appearances in Abakan, Divnogorsk (we examined the Krasnoyarsk Power Station) and Krasnoyarsk itself. On one occasion Euwe and I made an appearance in Vladimir and called in at Suzdal.* The director of the museum, a sympathetic young man, who had recently graduated from the History Department of Moscow University, volunteered to show everything in the museum to our guest. But how were we to cope with translation? The special terms which have long ago passed into history were not known to our interpreter who had been assigned from the Sports Committee. Back in Moscow when we caught the train I noticed an Englishman asking in Russian if the train went to Vladimir. Well, here he was in the museum. He asked us if he might attach himself to our tourist group. It turned out that he was a lecturer from London University and taught Russian. "Will you translate from Russian to English for us?" "Of course!" "Then you can join us." The Englishman knew all the historical terms and Euwe was delighted to be introduced to the history of the development of North-eastern Russia of medieval times. Instead of a fee for the translator we took him to Vladimir with us.

As soon as I returned to Moscow from Leiden there was a letter from Butenko in Novosibirsk refusing to go any further in the work. Subjectively Volodya was wrong, of course, without me he deviated from the correct path. Objectively he helped me by his refusal.

I considered earlier that the program had to be done by Butenko, so I acted pretty passively and did not penetrate into the various finer points of the work. When I was left on my own I realised that Krinitsky's

* Samal; One of the most ancient Russian cities, first mentioned in chronicles in 1024. 77.

request that I should work out the flow-chart of the algorithm was correct. I had to get down to this task.

By that time the algorithm had progressed to a considerable extent. At the end of May 1969, during a holiday in the Crimea, I discovered a new element in the algorithm—the zone. A simple zone is the sum total of the pieces and the trajectories of their moves where the basic trajectory is the trajectory of attack of an attacking piece in the direction of the attacked piece. Other pieces either hinder this attack (if they are of the same colour as the attacked piece) or support it (if they are of opposite colour).

It turns out that such a zone is formed according to a strictly determined structure, the zone containing only those pieces which manage to take part in the struggle. (Butenko had decided that the inclusion of a zone in the algorithm was not essential. Formally speaking that is where we parted.)

I continued working on the formulation of the work, not stopping either on trips or on holiday. In the autumn of 1971 I did an extensive tour of Yugoslavia, travelling about 2500 kilometres by car. I visited Serbia, Macedonia, Montenegro, Bosnia and Hercegovina, Croatia, Slovenia and Voevodina! Frankly speaking, the deepest impression was made by Montenegro. What steep cliffs, what ravines! We spent the time with Bozhidar Kažić, now Vice-President of FIDE. He was born in a small village not far from Cetinje, graduated from high school in the ancient capital and during the war was with the partisans in the mountains.

The Montenegrans consider themselves 'almost Russians' and joke, "With the Russians there are two hundred million of us". I was told how Montenegro has been at war with Japan since the Russo-Japanese war*.

Montenegro at that time allied itself to Russia and sent to the front (this is what the Montenegrans say) two soldiers. When the war ended they forgot to announce that hostilities with Japan were now concluded!

We went for a holiday on the Adriatic coast at Budva. The beach here is all fine white stones and there are no waves—the island of St. Nicola

stands 2 kilometres out and defends Budva from sea storms. The water is so clear that you cannot guess its depth!

We went swimming of course, and I finished my work. Bozho and I became friends. He is about 190 centimetres tall, fit, a calm Montenegrin, declaims Pushkin. Correct and a man of principles, yet there is something child-like about him. He is making a serious study of the history of chess and when he comes across an old chess book he is overjoyed, as if he had found a hidden treasure. When he knew that I was working he didn't get in my way (a rare quality).

I was rung up from the Council for Cybernetics of the Academy of Science. E. Geller (not to be confused with the grandmaster!), an employee of the Council, invited me to appear at a seminar on 8th December at the House of Scientists—very opportune. I had been trying to come to an agreement with various organisations about joint work on the program, but unsuccessfully. Krinitsky and Rameyev happened to meet at a conference, had discussed the matter and decided that they should assign programmers to the laboratory which I was in charge of. Of course, I was in favour of this. Possibly at this seminar I would find some collaborators?

I felt that the seminar went badly; plenty of questions but nobody spoke at length. At first, due to my poor eyesight, I could not make out the people present, but when the questions started I recognised the voices of my old acquaintances Shura-Bura and Adelson-Velsky. Then they came over to me and behaved politely, much had changed over five years. Along with Adelson came Donskoy his new collaborator.

"We are improving our program", said Georgy Maksimovich.

"Do you distinguish moves that have point for your tree of selection, or are all moves included indiscriminately?"

"All moves are included."

"That is hopeless", I said categorically.

Donskoy now came into the conversation. "That is your view, but we think otherwise." So that is the way I found comrades for the work.

However, Geller was very pleased with the discussion. "You've got to realise, nobody spoke against and how many questions there were. That means everything was fine. In your report you said that you have form-

* The War of 1904. Tr.

ulated your new work? Let's publish it in the Council as a pre-print." I thanked him for his kind suggestion and in the summer of 1972 the pre-print, "A Flow-Chart of the Algorithm for Playing Chess", appeared.

Geller helped too in the most important part. Soon the Chairman of the Council for Cybernetics, Academician A. Berg, sent off three letters: to the State Committee for Science and Technology, to Gosplan USSR and to the Ministry of Energy. As a result a decision was taken to open in our Institute the appropriate academic topic and for joint work to be undertaken with mathematicians of Gosplan. The State Committee for Science was favourably disposed towards the work.

Later I found out that the American edition of the book *Computers, Chess and Long-range Planning* had played its part in this. A senior official of the State Committee, V. Maksimenko, had once met at an international conference a leading American specialist on decision-making, Herman Kahn. "How did you like Botvinnik's book?", asked Kahn. "It made a good impression with us." Maksimenko asked to read the book when the question of setting up the topic was being decided.

Well, permission is permission, but where could programmers be found? We have no employment exchange, adverts for vacancies are not taken, but necessity is the mother of invention.

I took an interview from myself, having already had experience of this with Krinitsky for *Komsomolskaya Pravda*. This time I took all necessary precautions. The 'journalist' posed for me standard questions and even some hostile ones—it was impossible to guess that it was I who had set the questions. But the most important point of the interview was that the readers of 64* should know that I was looking for programmers and that applications should be sent to the Institute of Electrical Technology.

At first sight it would seem I was totally successful. There were about forty letters, one from Holland, even one from distant Australia. The Australian was worried that I had already got enough people and told me about his personal situation (married, but no children as yet), and that he was ready to come at once. However, from Muscovites there were

only twenty letters. There was no point in considering people from outside Moscow. Earlier I had managed to get registration for two people to live in Moscow as staff at the laboratory and I decided then that I wouldn't make this 'mistake' a third time*.

It was decided to create an examination board under the chairmanship of Krinitsky and including me, D. Lozinsky and L. Poltavets (it was envisaged that they would be consultants in the work of writing a program). We saw all the Moscow applicants and became glum. Either the programmers did not suit by reason of their ability or they were tied hand and foot by their current work or they themselves cried off when they heard of the prospect before them. Moreover, the question of staff establishment and salary authorisation was held up in the State Committee.

Then I went to the Ministry of Energy to see S. Mkhitarian who I had been friendly with nearly thirty years ago. He belonged to the old guard of Soviet power engineering specialists who provided the country with electric power during the war. It was then that the abilities of experts went through a severe testing.

"This is no problem", he said and assigned two vacancies and the corresponding salary budget. We shook hands. Now how to fill the vacancies.

In July Maksimenko phoned. "You still haven't found your programmers? I am sending you one." Thanks to him, he hadn't forgotten the chess program. The world is not lacking in kind people (in this old proverb 'kind' means 'good'). Half an hour later we were talking to Borya Stikman who had just graduated from the Mechanics and Mathematics Department of Moscow University and was dissatisfied with the post he had been assigned to.†

As a result, he had gone to Maksimenko hoping to find something more interesting. He had done well at his studies, admittedly, but looked very young.

* The great attraction of Moscow and the lack of living accommodation means that nobody can move there without police permission or registration in advance. Otherwise they may be sent away as vagrants. Getting permission is a very vexatious business. ††

† On graduation students do not apply for vacancies, but are assigned, some to plain jobs, some to less attractive posts, possibly far from the main centres. ††

* 64. The weekly (since January 1980, fortnightly) chess and draughts newspaper, a supplement to the daily *Sovietky Sport*. 64 has a circulation of many thousands and is taken by many keen players throughout the world. ††

"Where had you been assigned?"

"To the Computer Centre of the Institute for Electrical Technology."

So there we are! It meant we only had to come to an agreement with the head of our Computer Centre.

Borya had graduated in differential equations and had no connection with programming, but he could study it all up. I explained to him the problem that had to be solved. Stillman had no real choice—either a leap in the dark (that is to create a unique program—of a grand-master) or humdrum work at the Computer Centre.

Obviously this wasn't what he had dreamed about as a student, but possibly it was something even better. Borya agreed. So in August 1972 the first programmer turned up. Since he was not a chess player he was entrusted with the general part of the program—the program of move search. We had to find a chess player to guarantee the carrying out of the special, chess, part of the program. Once again we had to look through the list of Muscovite 'volunteers'.

The choice fell upon Sasha Yudin, a candidate master who had earlier been champion of the Moscow Institute of Rail Transport Engineering. All we had to do was to 'win him over' from the Central Research Institute of the Ministry of Rail Transport where he was working as a programmer. Sasha gave his assent, Berg authorised the transfer application and in September 1972 the second programmer appeared.

Over the period of a year I had accumulated a number of new ideas, much had been elaborated—I was writing a new work. I was invited to be a guest of honour at the Olympiad in Skopje. Fine—in the two weeks there I could finish off my new book.

I agreed everything with the mathematicians. Borya was to write the program for getting the trajectories, Sasla—the library of openings. All this was to be in Fortran. (Fortran is a form of computer language. In using it, it is harder to use a computer but easier to write the program.)

So, Skopje 1972. I lived in the Olympic village at the foot of Mount Vodno. In a two-storey house I occupy all the upper floor! Skopje had suffered from an earthquake and was being rebuilt with the help of donations.

The building was excellent and after the Olympiad the Olympic village

became a first-class hotel for tourists. The Olympiad was played in a new exhibition hall. The spectators were in the middle on a slope, the players sat below along the circumference. The spectators could watch any board with the aid of opera glasses, and without opera glasses could follow the demonstration boards. There had never been a better organised Olympiad. Will that level ever be reached again?

I worked well. After breakfast O'Kelly would call for me and we would walk up Mount Vodno, each day higher than the next (Alberic shortened his step and I managed to keep up).

Once Smyslov joined us; he has long legs so everything was in order. However, character told and Vasya did not turn up again.

In the middle of the Olympiad a large party of players and guests were invited to Belgrade. Two aeroplanes were provided and about two hours later we were received by President Tito.

Tito was already in his eighties, but held himself upright, spoke without notes and had a fluent grasp of English and Russian. After the official part the marshal sat down with Euwe on his left and on his right Botvinnik, Smyslov, Tal, Petrosian and Gligoric. We sat there and were silent. What should one do? I plucked up courage and said, "Comrade Marshall, it's very nice for chess players that you are a colleague of ours...."

"Yes, as early as the first World War when I was a prisoner of the Russians I played chess. Nowadays I have no time, but will there be a return match Fischer-Spassky?""

Euwe declared that the match was essential. It became clear that Tito supported Spassky. We discussed the prospects for chess both worldwide and in Yugoslavia. The conversation moved to politics. "My most sacred wish", said the President, "is that a world war will never be repeated."

After a photographer had done his work we said good-bye and flew back to Skopje. Kažić asked me to give simul's in three Macedonian towns one of them right by the Greek border. The fee was to be a washing machine for my wife! Bohzo is a kind and sympathetic friend. With the work finished I set off on my return journey and at Skopje airport I had an

* The month before, Fischer had won the title and Spassky was not in the Soviet Olympiad side. *Zr.*

unexpected meeting—Leonid Kogan!* He too was flying to Belgrade. I first saw him a third of a century ago when 16-year-old Lenny was appearing in the annual celebration at the Artek holiday camp.†

We have a pleasant conversation. Kogan tells me how he forgot to point out his suitcase a few days before, just before boarding another plane. (This rule was introduced to prevent luggage being loaded if a passenger didn't show for his flight—the struggle against terrorism!) As a result he flew to Ljubljana without his things! We parted at Belgrade.

During my absence Borya Stilman's mood had improved. He had thoroughly weighed up the task and was satisfied with his lot. He said to me with a wicked smile, "One of my comrades is already doing post-graduate work and when he met me he was surprised that I don't come to seminars of our department."

Fortran had been mastered, the sub-program of obtaining trajectories was being carried out. With Sasha Yudin and his library of openings progress was also being made. As was envisaged the young programmers were being given consultations by Losinsky and Poltavets.

Krinitsky was also satisfied and stated, rather unexpectedly, "The work will be finished successfully." "Why?" "You don't have any herd instinct". Yes, this feeling should be missing in every great chess player since he has grown used at the board to depend only on his calculations and rely only on his own strength.

In the summer of 1973 a new pre-print appeared under the imprint of the Cybernetics Council of the Academy of Science—"On The Cybernetic Goal of Chess". Sasha had finished his work on the library of openings and had begun to compose a library of endgames, but complications had begun with Borya.

In the algorithm there were obscurities and the necessity of forming a zone of play was insufficiently shown. The dynamics of changing the zone was also unclear, that is the mathematical map of a position. Borya tried to prove that the zone was not necessary. The dispute took up a lot of time and I was spending so much time and energy on the electrical technology that the work on the program came to a halt.

* Leonid Kogan (1924-), violinist and Professor at the Moscow Conservatoire. *Tf.*

† Artek, a resort and health centre for children, in the Crimea. *Tf.*

Finally in the winter of 1974 the question of the zone was resolved, but the obscurities over the formation of new zones and the dynamics of a mathematical map of a position remained. So I started reflecting whether I should give up electrical technology, as I had already done with tournament play, for the sake of a more important task?

Over the last few years the elaboration of the theory and the introduction of a controlled machine had made significant progress. In conjunction with a Kharkov factory a control system for an engine of 1000 kilowatts had been worked out completely. A test model of an AS-motor had been installed in a cement factory and a patent received abroad. A similar task in conjunction with the 'Electrosila' factory had been prepared for the experimental Kislogub tidal station. At the hydro-electric station on the Kolski peninsula all the necessary corrections had been made in the plan of an AS-generator, and in 1972 a test run for the required 72 hours was carried out.

However, the question of further production of test models and a series of AS-engines had come to a stop.

People are human beings. Just as was the case when I worked for chess generally and Soviet chess in particular and met with resistance, so too in electrical technology the resistance was becoming stronger all the time with the approach of the completion of work on the topic "The Alternating Current Controlled Machine".

Probably it was even easier in chess. You succeed in getting an event organised, then you play and show what you are capable of. In electrical technology if the factory doesn't do the work then you can do nothing either. Moreover, in the laboratory the situation was an uneasy one. From time to time it seemed to my colleagues that they would be better off without me! In the interests of the work I was patient and looked indulgently at this, but when the latest 'uprising' came on 19th June 1974 I did not have any doubts—the chess program must take precedence!

On 24th June an agreement was reached with the governing body of the Institute that from that date I would be concerned only with the computer program. This decision was not an easy one. I had devoted nineteen years to the problem of a controlled machine, yet had not succeeded in finishing off the scientific research—the work of the machine

in a dynamic régime still remained uninvestigated. Although here too I had not only ideas, but a clear work plan and a conviction that the dynamic stability of the machine could be achieved just like the static one, yet I decided to leave electrical technology.

By autumn 1974 the algorithm was put in order, Stilman had worked at full load. What was the essence of this work, why was it so important?

When I first read Claude Shannon's* work I did not appreciate it as fully as I should. At that time all that interested me was the fact that Shannon suggested, in formalising the play, (1) a complete search of all moves within the limits of the truncated tree, and (2) a selective search by analogy with the play of a chess master.

The first method (graphically called 'brute force' by American mathematicians, in the sense that the brute force of an animal is opposed to elegant human methods) could not satisfy me of course. Admittedly at that time the method α - β -pruning was not known—the method that allows cutting down the tree of analysis, but even this cannot save the method of total search from criticism.

The second method, of course, was fully acceptable, in principle, but there were no clear recommendations given for using this method. This is understandable since Shannon became acquainted with chess too late and was not a chess specialist. Yet his article contains a clear pointer to how a master uses his library of positions, uses his experience of the past uses games played earlier. At that time I did not notice this pointer and, continued working merely on move search in an original position when experience of the past is no help.

Later on I realised the significance of this work by Shannon. He had posed a very important problem in cybernetics—how to improve control, how to improve decision-making. Shannon suggested formalising and programming chess in order to use a chess computer as a model for solving similar control problems. The authority of Shannon was so great (he is the author of the theory of information) that his article immediately gave rise to a fresh scientific trend.

* Claude E. Shannon, Paper 1949, "Programming a Computer for playing Chess".
Tr.

Mathematicians calculate that the complete tree of analysis in chess, although finite, contains approximately 10^{120} positions (10 to the power of 120).

If a game lasts 100 moves then the average thickness of the tree is made up of 10^{118} positions. Hence this tree is a really fine pancake.

There is no possibility not only of studying but even formulating such a super-gigantic tree. What is to be done? There is no way out other than cutting off the top, that is formulating and analysing a truncated tree where the depth of variations is comparatively small.

A master calculates variations to 5 or 6 moves. If we measure these variations in units of chess time (mathematicians measure this time in half-moves), then the depth of variations is equal to 10–12 half-moves. Let us assume that variations are limited to 6 half-moves, i.e. half as much. Let us also assume that we are analysing a position where on average in each node (position) of the tree there are 20 possible different moves. It is not hard to calculate that such a truncated tree contains about 70 million positions.

Mathematicians apply a fine method which enables one to reduce the numbers of moves in the tree, the so-called method of α - β -pruning. The essential point is that by no means all moves are essential for making a decision (choosing a move). This method of α - β -pruning enables one to get rid of a significant part of the ballast (unnecessary moves). The tree is cut down from 70 million to several tens of thousands, that is about a thousand times. Yet if one bears in mind that a chess master considers in his analysis only some tens of moves then the amount of garbage in the tree is still far too great. If 70,000 is divided by 6 half-moves then the average width of the tree exceeds 10,000 positions.

The burgeoning of the tree sideways as depth of analysis increases is of a catastrophic nature.

A human being solves problems such as chess ones (and chess is a typical problem amongst those which people are constantly trying to solve) by forming a tree of analysis. If it is at all possible to provide an exact solution then one has to form a complete tree of all variations.

Moreover, the optimum variation is determined by means of an exact evaluation function, or putting it in a simplified way, by an exact goal of

play. Yet in the overwhelming majority of cases forming a complete tree is an impossible task, you simply have to cut down the variations.

However, with a truncated tree an exact goal of play is, as a rule, useless and you need another goal, an inexact one. Yes, it is of no benefit to keep in the truncated tree all variations, good and bad, as you have to seriously reduce the maximum length of variations. If only it were possible to arrange matters in such a way that the variations were cut off logically, then, instead of a wide short tree, one could formulate a narrow and long one (and use far fewer moves in the tree). As a result the decision would be more exact.

In my brochure *On the Cybernetic Goal of Play*, published in 1972 by the Soviet Radio Publishing House, there is an explanation that success is determined in the first instance by the quality of the chosen goal of play.

If a computer could play at grandmaster strength based on this algorithm (and a program in accordance with it) then the method used could be applied in the solution of important practical problems, especially in the field of economics.

In December 1974 the English master Levy came to Moscow. He has been judge at all chess computer competitions, including the first world championship at Stockholm in 1974 and the second at Toronto in 1977. He invited us to play in the next championship and we agreed.

Two other volunteers turned up: Misha Tsfasman and Sasha Reznitsky, the former from the Mechanics and Mathematics Department, Moscow University, the latter from the Department of Applied Mathematics of the Institute of Chemical Engineering (where Professor Krinitsky was working at that time).

Misha was a first-category player, Sasha a valid candidate master (the chess team of our Institute was strengthened!) Both of them, like Stillman and Yudin, spoke English. Of course, in comparison to my experienced programmers the new arrivals seemed like fledglings, but they quickly settled in.

Work began on writing a library of middlegame positions. Under the guidance of Yudin, Reznitsky carried this out as his thesis. Here a basically new problem had to be solved—what should be put into the memory

of the computer (and by analogy with how a chess master uses his library) how should the computer make use of the data?

In essence, when a chess master has to deal with a given position (from a game or from his analysis) and it seems to him that something is similar to what he has studied earlier, then he works on the basis of association with his previous experience. By the way, when the work was already being finished off Sasha Reznitsky found out that Shannon had also written about this in his article of 1950.

It all looks simple, but how does one formulate this so that the computer can be adjusted? It turned out to be far from simple, but the problem was formulated and solved.

The computer's memory holds a fragment, a part position, consisting of those pieces which earlier in some game moved about and at some time brought some benefit. If the position of part of the pieces from the game played by the computer is akin to the fragment then the computer uses the experience of the past in its analysis.

Eleven studies were prepared a long time back to test the program—some years ago* I wrote a foreword to a collection of studies by G. Nadareishvili in which I said that it is with studies that one's experiments should begin. My reasoning was simple: studies contain forced tactical play, positional judgement is not necessary and since positional understanding will be introduced into the program last of all then one should start with studies.

So we started with Reti's famous study (White K on h8, P c6; Black K a6, P h5. Draw). What could be simpler and at the same time more witty than this work of art? (Solution 1 Kg7 h4 2 Kf6 h3 3 Ke7 or Ke6 and forces his own pawn through to queen, or 1... Kb6 2 Kf6 h4 3 Ke5 h3 4 Kd6 with the same outcome. 7r.)

By the way we had to 'christen' the program. In December 1976 an invitation came to participate in the World Championship for Chess Computers. We had to fill in a form where one of the questions concerned the program's name. I suggested 'Human Being' since it works by the human method. Borya suggested 'Pioneer' (it turned out that he

* In 1970 in the Georgian's *Selected Studies*, published in Tbilisi in Russian. 7r.

had this ready for a long time), since the program paves new ways in the field of decision-making. We discussed the matter and decided that it still has a long way to go to being human, but is already a pioneer!

So, in December 1976 to January 1977 'Pioneer' solved Retis' study. We thought it would all be simple, but it turned out to be very complicated. Without positional judgement and without a linked library of the endgame the tree crawled on. The computer was not a high-powered one, the solution took hours and there was no result. It became clear that 'Pioneer' would have to be helped.

We took the rule of the square and programmed it in three modifications, put this into the library and 'Pioneer', in every node of the tree, got the necessary information from the library. The effect was striking—the study was solved in 70 minutes and the tree of analysis contained only 54 moves.

A small human tree was first achieved on 28th January 1977, which is certainly a remarkable event in cybernetics.

The most important result of the experiment is the conclusion: (1) a program for move search alone in an original position cannot produce a small tree (you need libraries which hold knowledge accumulated earlier) and (2) without positional understanding 'Pioneer' too would find it hard. Yet we decided to try its powers on another study, this time by Botvinnik and Kammer, composed by the two friends when young (White K on a1, Qa2, Bd2, Pf3, g2; Black Kh5, Qg7, Nd3, Pe5, g6. A win.)

There is an amusing mistake in this study. When we composed it in 1925 we had a disagreement. My comrade insisted that it should be a black bishop on g6, while I insisted on a black pawn. The point is that the combination realised in the study was taken from a friendly game in which g6 was occupied by a black pawn. Finally Sasha Kammer convinced me and it was published with a bishop at g6. When I reconstructed the position from memory for 'Pioneer' I mistakenly put a pawn on g6!

Here, too, poor 'Pioneer' struggled away lacking as it did positional judgement. We had to put in palliative rules (instead of this judgement) and the study was solved in 2 hours 43 minutes with the tree containing 143 moves. (Solution 1 g4+ Kb4 2 Bh6! Qxh6 3 Qh2+ Kg5 4 Qd2+ Nf4, to save the queen, 5 Qd8 mate. Tr.) This happened on 11th April

1977 and just as in January at the Chief Computer Centre of Gosplan USSR (after the program had been improved the solution time was cut to 45 minutes). It would seem that solving studies should be discontinued until positional judgement had been built in.

However, a tactical consideration was taken into account and led to a different decision.

The point is that both studies, in all probability, could be solved by other programs. If 'Pioneer' abandoned its experiments on studies and other programs achieved the same results then this could, for a time, do harm to the interests of propagandising new scientific ideas and could incline the efforts of cybernetics scientists to the wrong direction. So it was decided to carry on experiments for one more study, Nadareishvili's well-known composition (White K on h8 Pe3, g5, h5; Black Kf5, Be2, Ne1, Pe5, c7, e6. A win.)

The fact that this study cannot be solved by the method of complete search is clear. But was it within the powers of a still incomplete 'Pioneer'? (Solution 1 g6 Kf6 2 g7 Bh7! 3 e4! Nf3 4 e5+ Nxe5 5 Kxh7 Nf3 6 g8/Q Ng5+ 7 Qxg5+, to prevent perpetual check by the knight, 7... Kxg5 8 h6 c4 9 Kg7 e3 10 h7 c2 11 h8/Q c1/Q 12 Qh6+ wins the queen, or 1... e5 2 g7 Bb3 3 h6 Nf3 4 h7 Ng5 5 g8/Q. Tr.)

By this time 'Pioneer' had transferred to a more modern but slower computer at the Technical Information Centre and so formed the tree much more slowly. Since there is more play (different sorts of position) in Nadareishvili's more complicated study, technical programming bugs began to appear. The square g7 was 'sick'. The black knight kept arriving at this square from g5, e5 and d7! The tree also kept growing!

Stilman acted in a forthright manner. Like an aeronaut he started jettisoning 'ballast', that is switching off the sub-programs which did not have any direct connection with this study. Admittedly he got rather carried away and switched off sub-programs that were needed, so that we did not manage to get the full solution of the author. Because of an unknown technical bug we simply couldn't finish off one sub-tree (though when I informed Nadareishvili of this he was greatly surprised—the program had formulated an important sub-tree of whose existence the author himself had not dreamed!) and I gave the order for 'Pioneer'

not to analyse it. Once again we had to introduce palliative positional judgement and, as a result, when we no longer had any hope of a successful ending of the experiment, a miracle happened.

On 3rd August 1977 I went to the Technical Information Centre and went up to the room where the programmers were working. I was afraid to cross the threshold—whenever I called in there was always unpleasant news. However, Borya laughed and came out to meet me, "Don't be afraid, you can go in, we've got the tree."

In a period of 3 hours 45 minutes 'Pioneer' (in its draft form!) had got the tree of this complicated study. There were exactly 200 moves in the tree (obviously the figure is just a coincidence). Now I could set off for Canada to the World Championship for Computers. Obviously 'Pioneer' could not compete, but it would be pleasant to demonstrate what it was capable of.

Two days after the solution of the study I flew out to Toronto (alas as guest of honour, not as a participant, of the Championship). The route was a long one—Moscow, Kiev, Paris, Montreal.

In Montreal a stern lady from the immigration bureau was about to begin the interrogation—what was I intending to do in Canada? However, she quickly grasped what was what and I ran over to the plane for Ottawa (boarding was coming to an end). One more change and finally I was met in Toronto by my old acquaintances (by personal contact and correspondence) Master Levy and his wife, Professors Mittman (Director of the Computer Centre of the North Western University, USA, where Slate and Atkin, winners of this championship, work) and Newborn (organizer of the first computer tournament at New York in 1970). There was a pleasant surprise: Benjamin Mittman speaks Russian (with the same accent as Bent Larsen who also studied the language in an army school; more than twenty years ago Mittman served in the army and was sent to the school for Russian), while Monroe Newborn tried to study Russian, but this was his own idea.

The Championship was played in a ballroom of the Hotel Toronto. The centre of Toronto is full of skyscrapers, which are surrounded by old small buildings. The two hotel lifts run in a glass exterior shaft and this makes it convenient to look over the city. Entry to the tournament

hall was free and there were a lot of spectators. Unlike tournaments for human beings there is noise in the hall, but this doesn't annoy the programmers and even less the computers. By tradition the authors of the programs which are competing sit opposite each other at the chess board and each has a terminal (a control panel) with a display (a TV) which he uses to contact the computer, and on top of that there is a telephone link with the operating personnel of the Computer Centre where the computer is located.

Professor Newborn's program 'Ostrich' attracts attention. The small 'Supernova' computer is there on the table. Menty Newborn is studying the problem of the 'software' (writing various programs) for mini-computers. For this reason his program does not use large computers.

By an irony of fate 'Supernova' broke down in the third round of the Championship and 'Ostrich' was awarded a loss (in a winning position!).

In the first round of the 1977 championship the Soviet program 'Kaissa' lost to 'Duchess' and this decided the outcome. I watched this game from time to time and got the impression that Kaissa's setback was connected with a lack of positional sense—the program couldn't 'understand' that Black's king could be in danger. When I came back into the hall Kaissa was already playing with a rook down. I was informed on the spot that the rook was put 'en prise' because of a technical mistake in the program.

The next day analysis of the print-out for selected moves showed that the loss of a rook was forced, otherwise Black would have been mated in pretty fashion. When this was shown to the spectators they reacted with friendly applause. However, the story does not end here. Someone started the rumour that Botvinnik had not seen the mate at the time and had criticised Kaissa for the loss of a rook. This account was published in various places and obviously was pretty good advertising for Kaissa.

'Chess 4.6', the brain child of David Slate and Larry Atkin, was also not up to much except for the endgame. Since it was using a powerful computer, Cyber 176 (12 million average operations a second), it could hold several hundred thousand moves in the tree and in the ending extend its depth of variation to 12 half-moves. In the endgame it won easily

against its rivals. This happened in the friendly game, Kaissa-Chess 4.6, which was played the day after the championship.

One of the pleasant surprises here was Slate's statement (after Chess 4.6 had become champion!) that he and Atkin were going to change the program and move away from complete search. I expressed my satisfaction to Slate, but added that without the introduction into the algorithm of the goal of inexact play there would be no real improvement. As soon as the game Kaissa-Chess 4.6 had ended I suggested to David Callander, consultant of the programming section 'Control Data Corporation' (on whose machine Cyber 176 the champions were playing), that he should get the Chess 4.6 program to solve Nadareishvili's study.

Callander was glad to agree and straight away gave the appropriate instruction to the Computer Centre at Minneapolis. The computer quickly found the first two moves for White, 1 g6 and 2 g7 (I played the Black side. The tree was so big that it was impossible to print it out and get a solution in the way 'Pioneer' acts), but at the third move went wrong by 3 Kxh7.

"This is a draw", I said looking at Callander. He nodded his head. "How many nodes in the tree?" I asked. He gave a laugh, waved his hand and said, "About a million."

Subsequently Callander got interested in the solving of studies. Chess 4.6 solved the studies of Reti and Botvinnik-Kaminer, as well as a long well-known pawn study on the theme of 'conjugate squares', but Callander has not sent a letter to say that Chess 4.6 has solved the Nadareishvili study.

In the company of Donskoy and Arlazarov (the authors of Kaissa) we went to see Niagara Falls, driven by the President of the local chess club, David Sherman. The sight was impressive, but I thought that it ought to be even more majestic! I spent three days in Montreal as guest of Newborn. The newspaper *La Presse* organized a simul, and McGill University a colloquium on artificial intelligence. In the department which Monroe Newborn is in charge of there gathered both chess players and mathematicians. Someone expressed doubts about the possibilities of artificial intelligence. The restrained Newborn became furious. "By the

year 2000", he declared, "a computer will write such novels that the readers will weep."

Once my wife and I were taking a walk in the woods and we met P. L. Kapitsa* and N. N. Semyonov.† I was introduced to Pyotr Leonidovich just before the war at the Rubinin's flat. The Kapitsas are residents of Nikola Gora so we met later there. I knew Nikolai Nikolayevich from the days of the Polytechnic.

"How goes your machine?" asked Kapitsa. "My car?" "Oh no," he smiled, "your scientific work." "Ah, the controlled machine? It is going well." Kapitsa gave a laugh, "No, your chess machine." Then I remembered that some months before Kapitsa had visited us, and I told him about the fine points of the chess algorithm.

"Well, Pyotr Leonidovich, the work is going forward."

"What is it you are talking about?" intervened Semyonov. "What machine is this?" Kapitsa explained to Semyonov that Botvinnik hopes to create an artificial chess master which will surpass the human chess player.

"That is impossible," declared Semyonov categorically, "human beings in principle, cannot create an automaton which would be more intelligent than a human being."

"If a human being is really clever," I said to the obvious satisfaction of Kapitsa, "then his automaton should be more intelligent than its creator."

But will this be the case?

* Kapitsa, P. L. (1894-), physicist, academician, studied under Rutherford at Cambridge between the wars. *Tr.*

† Semyonov, N. N., physicist, academician, Nobel Prize winner in 1936. *Tr.*

Conclusion

When people used to say that I must write my memoirs it seemed laughable to me. I had plenty of work, and I would write them when the sands of time began to run out.

Yet much of what happened is known to me alone. It is particularly useful for young players to know all this. So I decided to write, and only the truth, without waiting for the time when I no longer could.

I have written the truth as it seemed to me. Chess players are a group of people who are prone to suspicion, so this truth is subjective.

In my life there have been abrupt transitions: from my studies to chess, from chess to scientific work. There are the same abrupt transitions in this book—I trust the reader will not censure me for them.

Appendix: Selected Games

Game 1. J. R. CAPABLANCA—M. B. Simultaneous, Leningrad, 1925

1 d4 d5 2 e4 e6 3 Ne3 Nf6 4 Bg5 Nbd7 5 e3 Bb4 6 e×d5 e×d5 7 Qb3 e5
8 d×c5 Qa5 9 B×f6 N×f6 10 0-0-0 (10 a3=) 10 ... 0-0 11 Nf3 (11
N×d5 N×d5 12 Q×d5 Be6 ♣) 11 ... Be6 12 Nd4 Rae8 13 e6 B×c3
14 Q×c3 Q×a2 15 Bd3 b×c6 16 Kc2 e5 17 N×e6 (17 Ra1 c×d4)
17 ... Qa4+! 18 b3 Qa2+ 19 Qb2 Q×b2+ 20 K×b2 f×e6 21 f3 Re7
22 Ra1 e4 23 b×c4 d×c4 24 Be2 Rb8+ 25 Ke1 Nd5 26 Rhe1 e3 27 Ra3
Nb4 28 Re2 Rd8 29 e4 (29 Bb3 c2! 30 B×c2 Rdc8) 29 ... Re6 30 Re3
Rd2 31 Re×c3 R×c2+ 32 R×c2 R×c2+ 0:1

Game 2. M. B.—S. FLOHR 9th Match Game, 1933

1 e4 e6 2 d4 d5 3 e×d5 e×d5 4 e4 Nf6 5 Ne3 Ne6 6 Bg5 d×e4 7 d5 Ne5
8 Qd4 Nd3+ 9 B×d3 e×d3 10 Nf3 (10 B×f6 came in game 1 of the
match) 10 ... g6! 11 B×f6 e×f6 12 0-0 Qb6 13 Rfe1+ Kd8 14 Qb4!
(14 Q×d3 Bd6!) 14 ... g5 15 Qh5 Bd6 16 Q×f7 Rf8 17 Q×b7 g4!
18 Nd2 Qc7 19 Qb6 Qf7 20 Ne4 Be5 21 N×e5 f×e5 22 Qg5+ Qe7
23 Q×e5 Q×e5 24 R×e5 Bf5 25 Rf1 Kd7 26 f3 b5 27 f×g4 B×g4
28 h3 b4 29 Ne4! R×f1+ 30 K×f1 Rf8+ 31 Ke1 Bf5 32 g4 Bg6 33 Re6
1:0

Game 3. A. ALEKHINE—M. B. Nottingham, 1936

1 e4 c5 2 Nf3 d6 3 d4 e×d4 4 N×d4 Nf6 5 Ne3 g6 6 Be2 Bg7 7 Be3 Ne6
8 Nb3 Be6 9 f4 0-0 10 g4 d5! 11 f5 Be8 12 e×d5 Nb4 13 d6 Q×d6 14 Be5

Qf4! 15 Rf1 Q×b2 16 B×b4 N×g4 (16 ... Qg3+? 17 Rf2 N×g4 18 Ne4!) 17 B×g4 Qg3+ 18 Rf2 (18 Kd2? Bb6+) 18 ... Qg1+ 19 Rf1 Qg3+ 20 Rf2 Qg1+ $\frac{1}{2}$: $\frac{1}{2}$

Game 4. M. B.-J. R. CAPABLANCA AVRO, 1938

1 d4 Nf6 2 e4 e6 3 Ne3 Bb4 4 e3 d5 5 a3 B×c3+ 6 b×c3 e5 7 e×d5 e×d5 8 Bd3 0-0 9 Ne2 b6 10 0-0 Ba6 11 B×a6 N×a6 12 Bb2 Qd7 13 a4 Rf6? 14 Qd3 e4 15 Qe2 Nb8 16 Rae1 Ne6 17 Ng3 Na5 18 f3 Nb3 19 e4 Q×a4 20 e5 Nd7 21 Qf2 g6 22 f4 f5 23 e×f6 N×f6 24 f5 R×e1 25 R×e1 Re8 26 Re6 R×e6 27 f×e6 Kg7 28 Qf4 Qe8 29 Qe5 Qe7 30 Ba3! Q×a3 31 Nh5+ g×b5 32 Qg5+ Kf8 33 Q×f6+ Kg8 34 e7 Qe1+ 35 Kf2 Qe2+ 36 Kg3 Qd3+ 37 Kh4 Qe4+ 38 K×h5 Qe2+ 39 Kh4 Qe4+ 40 g4 Qe1+ 41 Kh5 1:0

Game 5. M. B.-M. EUWE Groningen, 1946

1 d4 d5 2 Nf3 Nf6 3 e4 d×c4 4 e3 e6 5 B×c4 e5 6 0-0 a6 7 a4 Ne6 8 Qe2 Be7 9 Rd1 Qe7 10 Ne3 0-0 11 b3 Bd7 12 Bb2 Rac8 13 d5 e×d5 14 N×d5 N×d5 15 B×d5 Bg4 16 Qe4 Bh5 17 B×c6 Q×c6 18 Ne5 Qe8 19 Rd5 Rd8 20 Nd7? (20 g4!) 20 ... R×d7 21 R×h5 Qd8 22 Rf1 g6 23 Rh3 Rd1 24 g4 R×f1+ 25 K×f1 b5 26 a×b5 a×b5 27 Qf4 f6 28 e4 Qd1+ 29 Kg2 Bd6 30 Qf3 Q×f3+ 31 R×f3 Be5 32 B×e5 f×e5 33 Re3 Re8 34 Kf3 Kf7 35 Ke3 Ke6 36 f4 e×f4+ 37 K×f4 e4 38 b×e4 b×e4 39 h4 b6 40 g5 h5 41 Ke3 Ke5 42 Re2 c3 43 Kd3 Rd8+ 44 Ke3 Rd4 45 R×c3 R×e4+ 46 Kf3 R×b4 47 Re6 Rf4+ 48 Ke3 Re4+ 49 Kf3 Kf5 50 Rf6+ K×g5 51 R×g6+ $\frac{1}{2}$: $\frac{1}{2}$

Game 6. M. B.-P. KERIS The Hague, 1948

1 d4 Nf6 2 e4 e6 3 Ne3 Bb4 4 e3 0-0 5 a3 B×c3+ 6 b×c3 Re8 7 Ne2 e5 8 Ng3 d6 9 Be2 Nbd7 10 0-0 e5 11 f3 e×d4 12 e×d4 Nb6 13 Bb2 e×d4 14 e4! Be6 15 Re1 Re7 16 Q×d4 Qe7 17 e5 d×e5 18 R×e5 Qf4 19 Be1 Qb8 20 Rg5 Nbd7 21 R×g7+ K×g7 22 Nb5+ Kg6 23 Qe3 1:0

Game 7. M. B.-M. EUWE Moscow, 1948

1 d4 d5 2 Nf3 Nf6 3 e4 e6 4 Ne3 e6 5 e3 Nbd7 6 Bd3 d×e4 7 B×e4 b5 8 Bd3 a6 9 e4 e5 10 e×c×d4 11 N×b5 a×b5 12 e×f6 Qb6 13 f×g7 B×g7 14 0-0 Ne5 15 Bf4 Bb7 16 Re1 Rd8 17 Re1 Rd5 18 Be5 B×e5 19 R×e5 R×e5 20 N×e5 N×d3 21 Q×d3 f6 22 Qg3! f×e5 23 Qg7 Rf8 24 Re7 Q×e7 25 Q×e7 Bd5 26 Q×e5 d3 27 Qe3 Be4 28 b3 Rf7 29 f3 Rd7 30 Qd2 e5 31 b×e4 b×c4 32 Kf2 Kf7 33 Ke3 Ke6 34 Qb4 Re7 35 Kd2 Re6 36 a4 1:0

Game 8. M. TAL-M. B. Moscow, 1961

Position at second adjournment: White. Kb3, Ra8, P's a6, c5, d4, f4; Black. Ke7, Rb1, P's c6, d5, f5.

Play continued: 89 Ka2 Rb5 90 a7 Ra5+ 91 Kb3 Kb7 92 Rf8 Rb5+ 93 Ka4 (93 Kc3 Ra5) 93 ... K×a7 94 R×f5 Rb1 95 Rf6 (95 Rf7+ Ka6 96 Re7 Rb4+! playing for stalemate) 95 ... Kb7 96 f5 Ra1+ 97 Kb4 Rb1+ 98 Ke3 Re1+ 99 Kd2 Rf1 100 Ke3 Ke7 101 Rf7+ Kd8 102 Ke2 Rf4 103 Kd3 Rf3+ 104 Kd2 Ke8 105 Ke2 Rf4 106 Ke3 Rf1 107 Rf8+Kd7 108 Rf6 Ke7 109 Rf7+ Kd8 110 Ke2 Rf4 111 Kd3 Rf3+ 112 Ke2 Ke8 113 f6 Kd8 114 Rf8+ Ke7 115 Kd2 Kb7 116 Ke2 Rf4 117 Ke3 Rf1 118 Rf7+ Ke8 119 Kd2 Rf3 120 Ke2 Kd8 121 Rf8+ $\frac{1}{2}$: $\frac{1}{2}$

Game 9. M. B.-R. J. FISCHER Golden Sands, 1962

1 e4 g6 2 d4 Nf6 3 Ne3 d5 4 Nf3 Bg7 5 Qb3 d×e4 6 Q×e4 0-0 7 e4 Bg4 8 Be3 Nf7 9 Be2 Ne6 10 Rd1 Nb6 11 Qe5 Qd6 12 h3 B×f3 13 g×f3 Rf8 14 d5 Ne5 15 Nb5 Qf6 16 f4 Ne7 17 e5 Q×f4 18 B×f4 N×e5 19 N×c7 Rac8 20 d6 e×d6 21 e×d6 B×b2 22 0-0 Nbd7? (22 ... Ncd7!) 23 Rd5 b6 24 Bf3 (24 Bf4!) 24 ... Ne6! 25 N×e6? (25 Bb2 Nd4 26 R×d4! B×d4 27 Re1) 25 ... f×e6 26 Rd3 Ne5 27 Re3 e5 28 B×e5 B×e5 29 R×e5 R×d6 30 Re7 Rd7 31 R×d7 N×d7 32 Bg4 Re7 33 Re1 Kf7 34 Kg2 Ne5 35 Re3 Re7 36 Rf3+ Kg7 37 Re3 Re4 38 Bd1 Rd4 (38 ... Re1!) 39 Be2 Kf6 40 Kf3 Kg5 41 Kg3 Ne4+ (41 ... Rb4) 42 B×e4 R×e4 43 Ra3 (43 Re7!) 43 ... Re7 44 Rf3 Re7 45 a4 Re5 (scaled) 46 Rf7 Ra5 47 R×h7! R×a4 48 b4+ Kf5 49 Rf7 45+ Ke5 50 Rg7

Ra1 51 Kf3 b5? (51 ... Kd4! 52 R×g6 b5 53 h5 b4 54 b6 b3 55 Rg4+
 Kc5 56 Rg5+ Kb6! 57 Rg6+ Kb7! 58 Rg7+ Ka6 59 Rg6+ Ka5
 60 Rg5+ Ka4 61 Rg4+ Ka3 62 Rh4 b2 63 h7 b1=Q 64 b8=Q is the
 crucial line. Fischer claimed a win by 64 ... Qb3+ 65 Ke2 Qd1+
 66 Ke3 Rb1! but now 67 Qf8+ Ka2 68 Qe5! or Kasparov's 67 Re4
 Rb3+ 68 Rc3! Qe1+ 69 Kd3 Qf1+ 70 Kd2 Q×f2+ 71 Kd3 should
 draw) 52 b5 Ra3+ 53 Kg2 g×h5 54 Rg5+ Kd6 55 R×b5 b4 56 f4 Ke6
 57 Rb8 h3+ 58 Kh2 a5 59 f5 Ke7 60 Rh5 Kd6 61 f6 Ke6 62 Rb6+ Kf7
 63 Ra6 Kg6 64 Rc6 a4 65 Ra6 Kf7 66 Rc6 Rd3 67 Ra6 a3 68 Kg1 $\frac{1}{2}:\frac{1}{2}$

Achieving the Aim

In this fascinating and absorbing autobiography Mikhail Botvinnik, former world champion and one of the strongest players of the century, talks frankly about the life of a chess player in the USSR. He describes his encounters with such players as Alekhine, Keres, Euwe, Smyslov and Capablanca and summarizes his pioneering work in the field of computer chess. In addition the book contains a selection of some of his most crucial games and includes rare photographs from his personal collection.



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